UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL PARK

FILE NO.

MONTHLY REPORTS
DECEMBER 1939

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integrity of the official records.

ARNO B. CAMMERER,
Director.
For the year at Kilauea ending December 31 rainfall totaled 110.66" which was somewhat above normal. The heaviest monthly total, 29.85" fell during March which also included the greatest daily total on record; 11.01" falling on March 3. The maximum temperature was 78 degrees recorded on June 13, August 5 and October 2. The minimum temperature was 47 degrees recorded on February 10. During the year there were 111 days listed as clear and there were 74 days with .01" rainfall or less. December was the driest month in years with 18 clear days and 19 with less than .01" rainfall.

100 - Administration

110 - Superintendent's Special Activities

The superintendent was at Kilauea headquarters throughout the month; on the first he made a trip on foot from Hila Falls to the sea-coast west of Puu Kapukapu to inspect work being done by CCC enrollees planting coconuts and to examine an old Hawaiian village site. Three-foot trips into various portions of the Kau desert were made on the 17th, 26th and 28th to study damage to vegetation by goats which are obviously increasing in numbers besides being forced into the wetter sections of the park by the extremely dry weather. Several goats were killed on these trips. Frequent routine inspections were made of the CCC work on reconstructing the Hila Falls truck trail and routine inspections of the CCC camp and other going jobs in the park area.

The superintendent was elected president of the Hilo Badminton Club at its annual dinner on December 15. He was a guest of the Hilo Lions Club at its annual Christmas party held at the Volcano House on December 23.

Assistant to Superintendent Womaw kept in close touch with all jobs during the month making frequent inspections into progress of work, equipment and safety precautions.

150 - Plans, Maps and Surveys

CCC senior engineer foreman Wong continued to set grades on the Hila Falls truck trail, CCC job B-4. He also surveyed a proposed right-of-way for placing the Mutual Telephone Company's telephone line under ground through the headquarters area.

160 - General Publicity

The December 22 issue of the Honolulu Star-Bulletin carried an article regarding the collection of volcanic gases by Dr. Stanley Ballard of the University of Hawaii (also Research Associate in Geophysics with the Service) at the summit of Mauna Loa - 13,000 feet - reportedly the highest elevation that collection of terrestrial gases has been attempted. Monthly collections of gases are taken from the Sulphur Banks at Kilauea, as it is believed that the ratio of gas and water might change before a period of volcanic activity. If this should prove to be the case then there will be a new method of predicting volcanic activity.
MISSING PAGE #5 (INTERMITTENTLY):

200 - Maintenance, Improvements and New Construction

220 - New Construction

The second employee's cottage at Kilauea, CCC Project E-4, was completed in December and the third 50% completed. One and three quarters miles of sub-base on the reconstruction of the Kilauea Fall auto trail, CCC Job E-4, was complete; as were two fire tool caches, CCC Job 31a; the sewage disposal system, CCC Job 32a; and the ranger's quarters at Haleakala, CCC Job 30a, except for a very few minor inside details. Work was started on the woodshed at Kilauea, CCC Job E-5; and the main pipe line of the Haleakula water system, U-2, connected with camp storage tank and bathhouse. At Haleakula the horse trail, B-12, was completed from the office to road crossing and work started from the road to the park boundary.

220 - Special Improvement Activities

A Franklin stove was sent to Haleakula, and has been installed at the Pakanoa Observatory. It gives more heat and a more pleasant atmosphere, though it burns more wood than the cook stove which it replaced. The shelter and wire corral at Haleakula has been moved from the 8000 ft. switchback down to the ranger station area. At Kilauea, following a suggestion made by a visitor who had been in several mainland parks the ranger staff painted and placed several signs denoting places where autos might be parked. The visitor had commented that there were numerous signs stating "no parking" or "do not park here" but he had difficulty in finding where he could park his car. It is hoped these signs will prove useful to our visitors. Poles were framed for a "community" radio antenna installation, thus doing away with the numerous unsightly individual radio antenna poles.

CCC - During the month 11 boys were enrolled and 18 discharged. Of the discharges 7 were for expiration of term of service, 3 secured outside employment, 1 for physical disability and 4 dishonorable discharges. There was a total of 167 mandays lost due to sickness and accidents. One lad suffered from concussion received in a football game, all others due to colds, minor causes, and some injuries from a bad automobile accident on the 3rd (see 220 - Accidents). The basketball team was runner-up in the Hilo Recreation Center Businessmen's League. One recreational and safety meeting was held. The project superintendent's report shows a daily average of 144 enrollees released during the 20 working days - the low number of mandays was due to the holiday season. Dr. Phillips, camp physician, returned from the mainland on the 22nd. He had been called home because of the illness of his mother, who passed away 4 days after he reached home. At Haleakula the foreman's report shows a total of 374 mandays worked on projects, 28 mandays lost due to sickness, with 35 mandays given for re-enrollment leave. One safety meeting was held at that camp.
Activities of Other Agencies in the Park

Park Operators

A sketch plan was prepared by Senior Foreman, Landscape, E.S. Mollanhoff for the proposed operator's building to be erected by the Service at Haleakala section, when funds are available.

It was necessary to call the attention of the operator of the Volcano House to his failure to complete certain improvements in sanitation which had been reported to him after regular quarterly fire and sanitation inspections.

Interpretation

Lecture and Guide Service

Because of the extremely favorable weather there were several requests for special nature hikes, most of them being to Mauna Kea and the 1790 Footprints.

Research and Observation

The annual bird census by the Kumuiki Society of Hilo, made in the park on December 17 follows. The census was taken over the same route traversed during the last two annual censuses and at approximately the same date.

<table>
<thead>
<tr>
<th>Bird</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apahana</td>
<td>417</td>
</tr>
<tr>
<td>Linnet</td>
<td>37</td>
</tr>
<tr>
<td>Mynah</td>
<td>60</td>
</tr>
<tr>
<td>Iiwi</td>
<td>16</td>
</tr>
<tr>
<td>Turnstones</td>
<td>2</td>
</tr>
<tr>
<td>Omao</td>
<td>2</td>
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<tr>
<td>Fivowers</td>
<td>8</td>
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<tr>
<td>Elepiio</td>
<td>21</td>
</tr>
<tr>
<td>Turtle doves</td>
<td>1</td>
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<tr>
<td>Hill robin</td>
<td>70</td>
</tr>
<tr>
<td>Skylark</td>
<td>15</td>
</tr>
<tr>
<td>Amakihhi</td>
<td>110</td>
</tr>
<tr>
<td>Jap. pheasant</td>
<td>1</td>
</tr>
</tbody>
</table>

During the month the following birds were observed in the park: 1 Io near Hiloa crater; 1 pair Skylarks at east Aoli steam flats; 1 oama at Lava Tube parking area; 1 Io at Keowa, near Kapoho; 4 Kones at pit craters; 9 olive-green creepers at Kipukas Kulallo and Mamafu; 1 Io heard at Kipuka Pamalu; 3 olive-green creepers at 4 miles, Kulani trail; and 25 to 100 oama (common) at Kalani and along the trail.

Geology: Brother J. Maurice of St. Mary's School Hilo and Mrs. Alice Woods of Makalakana entered on duty December 1 as cooperative observers, in order that the seismographs located at these two places might continue in operation. Previously the salaries of these two observers had been taken care of by the Hawaiian Volcano Research Association, but due to the curtail appropriation of the association these positions were taken over by the Service.
MEMORANDUM FOR THE DIRECTOR:

There follows the narrative report for Hawaii for the month of December, 1938.

000 - General
010 - Introduction

With the volcanoes maintaining their present record of extreme quiet and only CCC jobs in progress, other than routine maintenance work by the park staff, the only unusual activities centered around the various community Christmas celebrations. The superintendent found it rather delightful to be at home again through the Christmas season as it was the first Christmas spent in the park since 1936, and it was particularly delightful to be a part of an organization which was working together so harmoniously and yet quite awake to the various problems arising from time to time and not averse to discussing them openly and fully, however divergent the preferred solutions might be.

A harmonious organization is desirable but it might represent only a forced harmony, or a harmony achieved through a group of more or less unawake and asinine assentors. If so its accomplishments at best are narrow and limited to the breadth of view of whomever heads it up. To this superintendent the essentials of a worthwhile organization working harmony are unity of purpose, aliveness, love of work, dissent, and respect for the opinions of the others. It seems that these essentials to quite a reasonable degree are present here in Hawaii.

020 - General Weather Conditions

At Kilauea headquarters rainfall for the month totaled 1.53", making it the driest month in years. Maximum and minimum temperatures were 73 and 49 degrees respectively on the 28th and 8th. A maximum wind velocity of 42 mph was recorded on the 27th. In the Haleakalā section rainfall for the month totaled 0.1" at the summit and 0.36" at the radger station. On the 27th a maximum wind velocity of 57 mph, which declined to 48 mph on the 28th and 29th was recorded at the summit. There was spotty frost from the 6700' elevation up, from the 7th through the 33rd. Snow remained in patches on the summits of Mauna Loa, Haleakalā, and Kea throughout the month.
December produced no new developments volcanically at either Kilauea or Mauna Loa. Seismic activity locally was meagre throughout the month and (as has occurred for the last 5 years) the week of and succeeding the solstice, December 21, was probably the quietest period of the whole year. Dr. Jaggar went to Honolulu December 20 to spend approximately one month continuing his work in conjunction with the University of Hawaii. He took with him typical seismograph recordings of earthquakes registered on instruments operated by the Observatory. Experimental photographic copies of these records will be made in an attempt to find the best method of duplication. Such duplication is desirable as further insurance against accidental destruction or loss of existing records and data.

Four distant quakes registered during the month, all but one of which occurred during the last two weeks. Newspapers reported numerous shocks scattered throughout the world during this part of the month. The surface waves of a teleseism registered at 2:15 p.m. December 26. This may have been the disastrous earthquake originating in Turkey about that time.

436 - Other; In an effort to learn more of the life history and Hawaiian food habits of the mongoose, Ranger Schulz has undertaken to collect the stomachs of these animals which have been supplied by other rangers.

600 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

There were 13,668 visitors at the Kilauea section as compared with 11,442 for December 1938; and at Haleakala the ranger in charge reports 1215 as against 2469 for last year.

520 - Visitors

A group of 20 Boy Scouts visited the park on the 23rd through the 26th and another group hiked to Pau Ulaula (10,000 elevation on Mauna Loa) on the 26th to 28th. There were also 246 officers and men from HMHS Shiryu on the 2nd and 3rd.

600 - Protection

610 - Ranger Service

Ranger John H. Winter and his family left on the 12th for Boulder Dam where Mr. Winter has been transferred. Reino R. Sarlin and Frank Ejord were selected from a Civil Service certificate and recommendations for their appointments as rangers were submitted.
630 - Wildlife Protection

On December 8 Ranger Jesse brought a Kolea with a broken wing to the museum. It had been found near Kilauea Military Camp and was presumably hit by a car. Due to the lack of technique and equipment it was impossible to splint the bird's wing. However, to prevent its destruction by a cat or mongoose, it was kept alive in a large cage, feeding on indigenous berries, but the bird came to an untimely end by falling head first into his drinking water and being unable to extricate himself, drowned.

Seven mongooses, seven rats and seven cats were caught in the mammal traps and disposed of.

At Kilauea 314 wild goats were disposed of, making a total of 968 goats for the year; and at Haleakala the ranger's chaise reports the destruction of 20 of these animals.

680 - Accidents

The CCC had considerable hard luck in December, there being a total of 3 accidents in which CCC trucks or enrollees were involved. On December 3 a truck load of enrollees going to Hilo on a recreation trip turned a corner on the park road, veering off to the main highway too fast, tipped over, resulting in 3 boys being seriously injured, one broken leg, one fractured vertebra and a dislocated shoulder. Formal report was submitted. Again on the 9th a truck load of boys on the way to Hilo on a recreational trip sideswiped a car driven by a Filipino, who was coming in the opposite direction. The enrollee driver claimed he was blinded by the oncoming lights and the fact that it was a very rainy night. Investigation showed that the CCC truck was too far to the middle of the road. There were no injuries this time. Report of this accident has also been submitted. On December 2 at Haleakala the park Ford coupe pickup driven by a CCC enrollee was considerably damaged, when the left front tire blew out, causing the car to careen from side to side and finally ending up in rocks and sand on the side of the road. Ernest Silva, the driver, suffered minor lacerations and bruises. Detailed report has been submitted.

900 - Miscellaneous

The annual Christmas party for the children of the Volcano district was held on the 23rd and was a pronounced success. The usual "white elephant" mile netted some $360 and with a $250 donation from one of the hotel guests we were able to purchase extra-special presents for the 80-odd children who either live in the area, or whose parents are employees of the park, CCC, or operators. On the 22nd the enrollees of the CCC camp invited the park personnel to their dinner, which was superlatively and great credit is due to the Quartermaster Clarence Underwood (who also acted as Santa Claus for the children's party) and his boys. Afterward there was a short entertainment in the recreational hall.
We were deeply shocked to learn of the death of Mr. R.H. Atkinson of Honolulu the latter part of December. Mr. Atkinson was the father-in-law of Charles W. Hite, Secretary of the Territory and a great friend and booster of the park.

In addition to the children's Christmas party, one was held at the local school, which most of the park children attend; and the park and CCC personnel also enjoyed a no-host dinner at the Volcano House the evening of the 29th.

On December 7 a daughter, Jean, was born to Mr. and Mrs. Chisato Fujimoto. Mr. Fujimoto is the park mechanic.

Edward G. Wingate
Superintendent
Children at the Annual Park Christmas party, held at the Volcano House. These are children who live in the district or whose parents are employed by the Park, CCC, and operators. The group represents about two thirds for whom presents were bought.
1 - Kiyuka Pumulu - general view during open meadow. Forest had been cleared and ground cultivated prior to establishment of park. These cultivated tracts have since become covered with a dense mat of foreign grasses and weeds choking out any possible natural reproduction of native forest. CCC project to remove most of grasses and turn up soil to promote forest growth supplemented by planting of seedling trees germinated in park green-house.
2. Kipuka Puaulu - close-up of exotic weed and grass eradication by CCC.
3 - Hilina Pali truck trail, CCC project R-9, enrollees placing coarse rock on small fill
b - Hilina Fall truck trail showing completed section of road
Completed garage for employees' personal cars, CCC job 235-3
No. 6 - Enrollees constructing stone curbing in vicinity of Volcano House, part of CCC job 319-705, Landscaping Headquarters Area.

7 - Clearing ground for woodshed, utility area, Kilauea section, CCC job 3-3.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

Kilauea Section, Hawaii

<table>
<thead>
<tr>
<th>National Park for the month of December, 1939</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Month</td>
</tr>
</tbody>
</table>

PRIVATE TRANSPORTATION:

- Cars first entry
- Cars reentry
- Motorcycles

| Total motor vehicles | 11,840 | 35,672 | 10,758 | 32,211 | 3,461 | 108%
| Persons entering via motor vehicles | 1,052 | 1,054 | 220 | 999 | 195 | 173%
| Persons entering via other private transportation | 12,332 | 36,726 | 10,998 | 33,110 | 3,616 | 109%

OTHER TRANSPORTATION:

- Persons entering via trains
- Persons entering otherwise

| Total other transportation | 1,336 | 2,524 | 444 | 1,592 | 932 | 85%
| GRAND TOTAL ALL VISITORS | 13,666 | 39,250 | 11,442 | 34,702 | 4,548 | 131%

| Automobiles in public camps during month |  |
| Campers in public camps during month |  |
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

Haleakala Section, Hawaii National Park for the month of December 1933

<table>
<thead>
<tr>
<th></th>
<th>This Month</th>
<th>This Travel Year</th>
<th>This Month To Date</th>
<th>Last Travel Year To Date</th>
<th>Increase for Travel Year</th>
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<td>PRIVATE TRANSPORTATION:</td>
<td></td>
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<td>Cars first entry</td>
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</tr>
<tr>
<td>Cars reentry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Motorcycles</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total motor vehicles</td>
<td>*843</td>
<td><strong>906</strong></td>
<td>1861</td>
<td>880</td>
<td>Decrease <strong>40%</strong></td>
</tr>
<tr>
<td>Persons entering via motor vehicles</td>
<td>*Excludes 98 trips by Park cars for month</td>
<td>**Excludes 354 Park trips for travel year</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Persons entering via other private transportation</td>
<td></td>
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<td></td>
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</tr>
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<td>Total persons entering via private transportation</td>
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<td>4076</td>
<td>2450</td>
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<td>46</td>
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<td>OTHER TRANSPORTATION:</td>
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<tr>
<td>Persons entering via stages</td>
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<tr>
<td>Persons entering via trains</td>
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<tr>
<td>Persons entering otherwise</td>
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<tr>
<td>Total other transportation</td>
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<tr>
<td>GRAND TOTAL ALL VISITORS:</td>
<td>1218</td>
<td>4076</td>
<td>2450</td>
<td>4330</td>
<td>46</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>This Year</th>
<th>Last Year</th>
<th>Increase</th>
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</thead>
<tbody>
<tr>
<td>Automobiles in public camps during month</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Campers in public camps during month</td>
<td>16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MEMORANDUM FOR THE SUPERINTENDENT:

Following is the Chief Ranger's report for the month of Dec. 1939:

010 Introduction: Although no unusual events occurred during the month, December was truly considered as phenomenal due to the excellent weather experienced throughout its length. Rainfall at park headquarters was .06 (?) inches for the month which is unusually low for this time of the year. This small amount of rainfall resulted in the park water supply being dangerously low over a considerable period but fortunately no building fire occurred. The dry spell, however, does prove conclusively that more adequate water storage facilities are badly needed here in the park.

Travel during the month was kept above normal by the fine weather and holiday traffic.

580 Visitors. Only a few organized groups made use of the park during the month. Mrs. Rockwell in charge of a group of 20 visited the park on the 23rd and 26th. A group of 10 boy scouts hiked to Puu Ulaula, on the 26 to 28th. Officers and men from the HMNS Shiriya, 125 on the 2nd and 121 on the 3rd.

The Lions Club of Hilo held their annual Xmas party at the Volcano House on the evening of the 23rd. About 180 members and guests attended.

610 Ranger Service. One ranger was detailed to Observatory and Museum duty throughout the month. Ranger Minter terminated his duties here as of Dec. 15th (?) having taken annual leave Dec. 1 to 15th.

Regular patrols were made of all park roads, grounds and buildings as well as trips into the following areas; Puu Ulaula, Halape, Pepeiao Pit Craters, Kipuka Xi, Kipukas Kulalo & Kaunaau, A Puna and K Ilauea Iki.

860 Miscellaneous. 314 wild goats were eliminated from the park during the month. This makes a total of 968 goats removed during the current year.

7 mongooses and 7 rats and 7 cats were also eliminated from the park during December.

Joseph H. Christ, Chief Ranger.
UNIVERS STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
Jan 1, 1940

MEMORANDUM FOR THE SUPERINTENDENT

Through CHIEF RANGER CHRIST

SUBJECT: Ranger Report for the Month of December, 1939

Duties:

Regular turn was taken Dec. 12 to 23 inclusive on 24-hour duty flag custodian, and night patrol. The working hours of 7 AM to noon and 1 PM to 4 PM were continued since they had proved most satisfactory in coordination with Assistant Geologist Waseshe and Assistant Park Naturalist Fagerlund.

The equivalent of nine days were spent in the discharge of Hawaiian Volcano Observatory duties.

A total of 14 days were spent on duty at the Uwekahuna Museum during which time between 50 and 60 persons were specifically contacted in answering inquiries and giving explanations. Also 4 lectures were given to 171 persons. Further contact work included conducting 5 trips for a total of 35 persons.

While on duty at the museum also all four display cases were puttid to make them more nearly "dust proof", one hole was made into a study skin as were two mogooses caught by Wildlife Ranger Olson. Further, printing was done on the new bulletin boards and considerable time was spent in the planning and execution of a series of explanatory charts to portray the geologic history of Hawaii. At present two are completed, a third 75%, and a fourth 75% complete. Some new labels were also printed in the course of slowly revamping some of the geological displays.

Comments:

1. The treads of two steps in the outside Volcano Observatory stairway are in need of immediate replacement.

2. The drain in the Volcano Observatory lavatory is badly stopped-up.

3. The short dirt road from the pavement to the Volcano Observatory proper has become quite rough from numerous chuck holes which are increasing in number and size.

4. It is noted that the Volcano House management is carefully raising a crop of Jerusalem Cherries adjacent to the overlook in front of the main entrance.
It is hoped that no offense is taken at the personal opinion of the undersigned with regard to some of the new signs. It has been noted that several members of the Park Staff do not observe certain "boulevard stop" signs, notably the two at the "T" where the Chain of Craters Road intersects the Crater Rim Road. This fact bears out the opinion that these signs are superfluous—not needed because of the very small volume of traffic involved. Traffic signs are of course a vital need, but since they are detrimental to any natural scene, it is felt that unnecessary signs may well be eliminated where compatible with public safety.

Also it is felt that the "No Parking This Side" signs in front of the Park Headquarters Office are confusing, leading the motorist to believe it is all right to park on the other side of the road. This was my first reaction and I did so. It was not until the next time I drove past in the opposite direction and noted a similar sign on that side of the road, that I realized my mistake. A simpler, smaller sign, "No Parking" would serve as well if not better.

The undersigned also ventures to suggest that yellow parking lanes be painted on the pavement in the new parking area between the "island" and the Park Headquarters Office. This would also allow the removal of the two signs "Park Here" by automatically conveying the idea to the public.

A directional sign might well be added, however, on the Kamalaha Highway at the Crater Rim and Kipuka Puaulu Roads intersection for the guidance of unfamiliar motorists and hikers. Placement of a directional sign might also be considered in the triangular grass "island" at Park Headquarters.

Days Off:

Of the total of 9½ days off allowed during the month of December, only 8 were taken because of the necessity of carrying on certain duties over the holidays. The following days were taken off during which some time was spent in working on the charts referred to above: Dec. 5, 10, 14, 16, 24, 26, 28, and the half days: Dec. 27, and 30.

Wildlife and Natural Phenomena:

On Dec. 8 Ranger Jess brought a Kolea with a broken wing to the Uwakahuna Museum. The bird had been found near EMC and was presumably hit by a car. It was found impossible to splint the bird with our lack of both equipment and technique. However, to prevent destruction at the hands of cat or mongoose, the Kolea was kept alive in a large cage, feeding on indigenous berries, but the bird came to an untimely end by falling head first into his drinking water and being unable to extricate himself. He has been added as a study skin to the ornithological collection of H. N. P.

In an effort to learn more of the habits and Hawaiian food habits of the mongoose, the undersigned has undertaken to collect the stomachs of these animals which are kindly supplied him by Ranger Olson. 2 skins put up.

The only precipitation in nine Mauna Loa rain-gauge readings were: Dec. 2: 1.07, 12: .04, 18: .10, and 31: .10.

Paul Ernest Schulz
Park Ranger
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

January 3, 1940

MEMORANDUM FOR THE SUPERINTENDENT. Through the Chief Ranger.

The ranger's report of activities for December, 1939, follows:

Dec. 2 and 3, Assisted with tour for HIJMS Shiriya, officers and men. Total visitors, including private drivers, 146. Cars, 46.


Dec. 6, KMC general tour, 3 persons. Cars, 1.

Dec. 8, KMC Wauna Iki Hike, 18 persons. Cars, 3.

Dec. 10, Accident involving CCC truck, observed and reported.

Dec. 12, Planted 3 flats, kopiko seedlings from Bird Park.


Dec. 15, Patrol along Hwy. east of Lava Tube & return via Keauhou RD.

Dec. 16, Tour for Honolulu football team, 28 persons in 2 cars.

Dec. 17, Bird Census with Manuiki group.

Dec. 18, Kipuka Puaulu hike, 5 persons, 1 car.

Dec. 19, Bird Talk and Erabatoo at KMC. Attendance, 61.

Dec. 19, Patrol trip to Kipuka Mauna'i.

Dec. 22, KMC Mauna Iki hike, 32 persons in 3 cars.

Dec. 26, (off duty) hike to summit of Kulani to clear trig. station.

The 5 mammal traps received from WML were altered and repaired during the month but much difficulty is still experienced from mongooses and rats escaping after being caught in the traps. The catch for the month was 9 mongooses, 7 rats and 6 wild or stray cats. 3 of the last mentioned animals were not caught in traps but shot in the park. More and better traps are badly needed to carry on this protection work for the birds.

Regular inspections were made of the Bird Park work during the month. It is hoped that time will be available next month to spend a week or more in this area to move some large koa seedlings down into the lower
section and supervise some selective weeding in other sections.

The Bird Count made by the Manu Iki Society group on Dec. 17, was
as follows:

<table>
<thead>
<tr>
<th>Bird</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apapane</td>
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<td>Mina</td>
<td>50</td>
</tr>
<tr>
<td>Iwi</td>
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<td>Turnstone</td>
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<td>Cmao</td>
<td>2</td>
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<tr>
<td>Plover</td>
<td>8</td>
</tr>
<tr>
<td>Elepaio</td>
<td>1</td>
</tr>
<tr>
<td>Turtle</td>
<td>1</td>
</tr>
<tr>
<td>Leipio</td>
<td>2</td>
</tr>
<tr>
<td>Hill Robin</td>
<td>70</td>
</tr>
<tr>
<td>Skylark</td>
<td>15</td>
</tr>
<tr>
<td>Amakihí</td>
<td>110</td>
</tr>
<tr>
<td>Jap pheasant</td>
<td>1</td>
</tr>
</tbody>
</table>

The census was taken over the same route traversed during the last 2 annual censuses and at approximately the same date. The route taken was as follows: 6:00 a.m., circuit trip through Bird Park via trail; from Bird Park turnaround to KMG via the Golf Course; From Lava Tube parking area through Kilauea Iki crater to Byron ledge, thence to Kilauea Rim Road and along the north rim of Kilauea Iki crater back to Lava Tube parking area; From Kauna Loa Truck Trail at Kipuka KI to Giant Koa and return via old Kauna Loa Trail.

The following birds were observed during the month:

Dec. 2, 1 Io near Hiiaka crater.
1 pair skylarks at east Aloi steam flats.
6, 1 cmao at Lava Tube parking area.
10, 1 Io at Koae, near Kapoho.
13, 4 Koae at Pit Craters.
18, 9 Olive Green Creepers at Kipuka Kulalio & Mannaiu.
22, 1 Io heard at Kipuka Puaulu.
25, 3 00 Creepers at 4 mi, Kulani Trail.
26, 25 to 100 cmao (common) at Kulani and along trail.

Gunder E. Olson,
Ranger.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

Wailuku, Maui
December 31, 1939

Memorandum to Superintendent E. G. Wingate
through office of Chief Ranger.

Enclosed are the weather reports, travel report, and
narrative report for the month of December, 1939, for the
Haleakala Section.

[Signature]

H. A. Powers
Ranger in Charge
Memorandum to Superintendent E. G. Wingate
through orice or Chief Ranger.

The following narrative report for the Haleakala Section for
the month of December is respectfully submitted:

000 General
010. December 1939 should be remembered as one month of glorious
weather. There has been not one cloudy day.
020. There have been 28 entirely clear days and 3 partly cloudy days
at Pakaaao Observatory, with only 0.10 inch of rain which fell
during the night preceding the first day of the month. There
were 25 clear days and 6 partly cloudy days at the Ranger Station.
0.17 inches of rain fell in the night preceding the first of the
month, and on three other days during the month we had 0.04,
0.01, and 0.03 inches respectively, making a total for the month
at the Ranger Station of 0.25 inches. A Kona storm started on
December 24 which has lasted to the end of the month. It has
brought no rain in the Park, but there have been several days of
high wind. Velocity at Pakaaao was measured at 57 miles per hr.
on the 27, and about 50 miles on both the 26 and 29. A minimum
temperature of 41 was measured on Dec. 13, and it has been 42 and
43 on several mornings.

100 Administrative
150. A "Franklin" fireplace stove was sent from Kilauea, and has been
installed in Pakaaao Observatory. It gives more heat and a more
pleasant atmosphere in the room. It burns more wood than the
cook stove which it replaced.
170. A contour map of the Ranger Station area is about two-thirds
completed. It will be used for the master plan.

200 Maintenance, Improvements, and New Construction
220. The shelter and wire corral has been moved from the 8000 foot
switch back down to the Ranger Station area. It makes it more
convenient for starting pack trips into the crater.

230. Floors have been stained and varnished in the Ranger Quarters.
A few little odd jobs remain before the house is finished.
Only two thirds of mile of trail remains to complete the new trail
from the Piu Hianiei entrance to the Ranger Station and to the
Halemaumau trail into the Crater. It will be passable by the
middle of this month, though some touching up work will have to
be done.

500 Use of Park Facilities by the Public
510. Auto travel was 243 cars for the month, about the same as last
month, but only half of this month last year.

600 Protection
640. Twenty goats, sixteen male and four female, were destroyed.

Ranger in Charge
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWEA NATIONAL PARK
HAWAII

January 11, 1940

Edward G. Wingate, Superintendent
Hawaii National Park


Dear Mr. Wingate,

The month of December produced no new developments volcanically at either Kilauea or Mauna Loa. Seismic activity locally was meagre throughout the month and (as has occurred for the last five years) the week of and succeeding the solstice, Dec. 21, was probably the quietest period of the whole year.

Dr. Jagger went to Honolulu December 20 to spend approximately one month continuing his work in conjunction with the University of Hawaii. He took with him typical seismograph recordings of earthquakes registered on instruments operated by the observatory. Experimental photographic copies of these records will be made in an attempt to find the best method of duplication. Such duplication is desirable as further insurance against accidental destruction or loss of existing records and data.

Volcanic Activity of the Month

The following were the local data for the month.

<table>
<thead>
<tr>
<th>Week Ending</th>
<th>Seismicity</th>
<th>Slides</th>
<th>Crack Openings</th>
<th>Local Tremors and Creaks</th>
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<tbody>
<tr>
<td>December 3</td>
<td>8.00</td>
<td>0</td>
<td>3.5 mm opened</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>6.25</td>
<td>1</td>
<td>0.5 # closed</td>
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<tr>
<td></td>
<td>17</td>
<td>9.00</td>
<td>3</td>
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<td></td>
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<td></td>
<td>31</td>
<td>5.25</td>
<td>0</td>
<td>0.5 # closed</td>
</tr>
</tbody>
</table>

An earthquake which registered as very feeble in intensity at the observatory but which dismantled the Pit Seismograph was felt in Hawaii National Park. A feeble earthquake at 5:25 a.m., December 22 was strongly felt at Kajapala ranch as was another at 12:07 p.m., December 23. Both probably were of Mauna Loa origin.
Four distant earthquakes registered during the month all but one of which occurred during the last two weeks. Newspapers reported numerous shocks scattered throughout the world during this part of the month. The surface waves of a teleseism registered at 2:16 pm, December 26, this may have been the disastrous earthquake originating in Turkey at about that time.

Fuming was observed almost daily in Halemaumau, probably from the SE solfatara after the middle of the month.

Microseismic activity was intense throughout the month.

Many earthquakes were reported "felt" in the Kona district of the island December 13, 14 and 15. No confirmation was given by the seismographs and it was concluded that Naval Gunnery practice off the NW coast of Hawaii produced the illusion.

Work of the Volcanologist:

Partially covered in introduction. Probably more completely covered by Dr. Jaggar next month.

Work of the Assistant Geologist:

Mr. H. H. Waesche has carried on the usual routines necessary for continuous assembly of seismic, tilt, and weather records. Crater angles were measured. Cracks around Halemaumau and along Chain of Craters were measured weekly. Press reports were compiled weekly. Routine Halemaumau field trips were made eight times. Six trips were made to the Mauna Loa seismograph station.

On December 12, a Howard pendulum was installed at the Hilo seismograph and put into operation.

On December 15, three tubes of gas were collected at the Sulfur Bank for Dr. Ballard of the University of Hawaii. At the same time Mr. Fagerlund, Park Naturalist made photos of the setup used to make the collection.

Two meetings of the Park Safety Committee were attended.

November earthquake locations were worked up and plotted on appropriate maps.

Work of the Assistant:

S. Sato continued work in the library and in doing necessary secretarial work for Dr. Jaggar. He assisted H. Waesche in making gas collections.

H. Yasunaka continued his work in and around the observatory grounds and at the University of Hawaii Laboratory Building. He assisted in removal of an unsightly trash dump near the observatory and has otherwise assisted in maintaining disposal of waste materials.
He also assisted Mr. Waesche in installation of the Howard clock at the Hilo station and has since supervised its maintenance and operation.

Ranger Minter was transferred early in December to Boulder Dam. Before leaving he did some work on the revision of the Eller tiltmeter which is being revised. This included construction of a Cardan hinge to replace the pivot type formerly in use.

Ranger Shultz has been doing most of the changing of seismograph records both at the observatory and in the field.

Hugh H. Waesche
Assistant Geologist
January 3, 1940.

MEMORANDUM FOR THE SUPERINTENDENT THRU THE CHIEF RANGER.

Subject: Narrative report for December. (Jess).

Routine flag, switchboard, and patrol duties were carried out during the month.

The following items were accomplished at various times during the month: "Park Here" signs were painted and erected at the parking area in front of headquarters. One stop sign was repaired and installed at the Chain of Craters junction. Assisted Mr. Waesche in the framing of poles for his antennas installation. Spent some time on telephone line maintenance, helping Foreman Quick to familiarize himself with the Park system. Repaired telephone instruments in the Volcano House Dormitory and Ainehou Ranch. Found short circuit in branch line to KMG switchboard.

My assignment to the various park tours produced a total of 68 contacts. In addition to this, I assisted in handling the group from the Japanese Oil Tanker on Dec. 2 and 3.

I made a trip to Puu Ulala and return, Dec. 26 to 28, with 10 members of our local Scout Troop.

I drove Ranger Minter and family to Hilo on Dec. 18 where they boarded the USAF Royal T. Frank enroute to the mainland.

On Saturday, Dec. 16, I investigated a smoke in the vicinity of the Halfway House and found it to be caused by Kapapala Ranch men engaged in burning brush.

On Dec. 18 I made a patrol trip to Hilina Pali and return, taking down lumber and supplies for the Park Warden.
Considerable pig damage has been observed in the Chain of Craters area and 4 pigs were seen near Alalesa during the month.

Three Io or Hawaiian hawks were seen in the Six Tanks area on Dec. 10.

One Kolea with a broken wing was sighted on the highway beyond HC-6 on Dec. 8. The bird was caught and turned over to Ranger Schulz for study skin purposes.

A group of pig hunters were stopped and questioned while in the Pau Huluhulu area during the month, and found to have the proper crossing permit.

Signed: Arthur L. Jess
Arthur L. Jess
Park Ranger.

During the month we enrolled 11 boys and discharged 15. Seven discharged for Expiration Term of Service, three who secured outside employment, one for physical cause and four dishonorable discharges.

One boy returned from Maui Camp.

There was a total of 167 days lost due to sickness and accidents during the month including Saturday, Sunday and Holidays. We had one bad accident on Sunday December 3 caused by the overturning of a truck while transporting enrollees, we were fortunate to have only three enrollees with major injuries, one broken leg, one fractured vertebra and a dislocated shoulder. One boy had a concussion in a football game on the 10th. All other due to colds and minor causes.

The Recreational Officers report shows a great deal of activity including, football, basketball and boxing. The basketball team won runner-up in the H. R. C. Businesses' League.

The enrollees are still attending the movies at the KHC.

Only one recreational and safety meeting was held during the month due to the holidays.

The Safety Assistants report shows all safety regulations are full followed in camp and on the projects.

Foreman Maka reports all wiring and fixtures are in good condition in the camp.

The Project Superintendents report shows an all average of 114 enrollees released to him during the 20 working days making a total of 2882 mandays used on projects, this low number of mandays was due to the holidays and many of the enrollees saved their six days due them for reenrollment for triphome at Christmas.

Jobs:

B-4 Employees Cottages:
70 mandays were used on this project. The second cottage was completed and the third one is 50% completed.

B-4 Hilina Pali Auto Trail
1392 mandays were used on this project. One mile and three quarters of sub-base is now complete.
314 Repairing Fences, Kiyuka Puaulu
50 mandays used here.

315 Fire Tool Caches
49 mandays used here. The two tool caches for Kilaeua are completed.

319 Landscaping, Headquarters Area
310 mandays used here.

321 Sewage Disposal System
148 mandays were used on this project and it is now completed

324 Removal of Exotics.
450 mandays used on this project in the Bird Park Area

B-3 Wood Shed
7 mandays were used starting this project.

Work was carried on in the park on some nine other projects.

Dr. Phillips the camp physician returned from his trip to the mainland on December 22nd. He was called to his old home in Wisconsin by the illness of his mother who passed on four days after his arrival home. He left Hilo on October 26th accompanied by his family. He inspected this camp on December 26th and reported the camp in good condition with the exception of the garbage rack. This will be remedied this month as funds are now available.

HALEAKALA SIDE CAMP

The foreman's report shows a total of 37½ mandays worked on projects, 28 mandays lost due to sickness with 35 mandays given for reenrollment leave.

Dr. Jones inspected the camp and enrollees on the 19th.

One Safety meeting was held during the month.

Project shows:

145 U-2 Water System
Connected main pipe line with camp storage tank and camp bath house.

B-12 Horse Trail
Completed trail from park office to road crossing. Started from park road to park boundary.
Bangere Cottage
Completed interior painting, vanished and stained floors. Layed linoleum in kitchen and toilet. Completed cesspool.

Camp Bath House
Installed showers and washing facilities.

Respectfully submitted,

Frank C. Huston,
Camp Director,
CCC HNF
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.

ARNO B. CAMMERER

Director.
MEMORANDUM FOR THE DIRECTOR:

There follows the report of activities in Hawaii National Park during November, 1939.

000 - General

010 - Introduction

November was another very quiet month and the staff confined its activities to routine work. The lull, however, gave time for more field trips and studies of proposed projects, principally erosion control in the Hitina Pali region and exotic removal in Kipuka Pauahi and other points. Field trips disclosed the necessity of the rangers exerting greater effort and spending more time eliminating the remaining wild goats. Because of the difficult terrain the goat drives could not completely eliminate the goats and if not rigorously controlled the remainder will multiply rapidly and the value of the original work will be largely lost. There has been a marked improvement in the ground cover in the time since the big drives were held. Work by the CCC on the Hitina Pali auto trail reconstruction is progressing satisfactorily since a larger force was put to work and Foreman Nakamoku placed in immediate charge. The superintendent and assistant to superintendent Moomaw kept in close contact with the job.

The last regular sanitary inspection of the Volcano House premises disclosed several unsanitary conditions, some of which had been previously called to the operator's attention. The superintendent made a personal inspection and took up the matter of improvements with the operator, requesting that broken screening be replaced without delay.

The superintendent and chief clerk spent some time studying the current appropriation in the light of urgent maintenance work to be done, new positions to be filled, increases in pay and the President's request for economy.
General Weather Conditions

Precipitation at headquarters totaled 6.64" and maximum and minimum temperatures were 72 and 50 degrees respectively; with a maximum wind velocity of 36 mph on the 3rd. The first snow of the season was visible on Mauna Kea on the 9th and on Mauna Loa on the 11th, covering the summit plateaus. At Haleakula the ranger in charge reports that there was a total of 2.99" of rain at the observatory and 3.45" at the ranger station, with frost on several mornings.

Administrative

Superintendent’s special activities

Frequent inspections were made of the work on the Hila Pali auto trail job, exotic plant removal in Kipuka Puaulu and the laborers’ quarters construction jobs, all under CCC. A complete inspection to determine priority of road maintenance repairs by park force account was made with Foreman Quick. One general inspection of public facilities and campgrounds was made. On the 24th he welcomed Congressman Crow, Sager and Andresen and Delegate King, accompanied by Chairman Spencer of the Board of Supervisors and others. The party had an extended lunch at the Volcano House, and a hurried trip to Halemaumau because of very wet weather, then left for Kona.

Park Inspections

Mr. Henry W. Woolman, of Philadelphia, President of the Horseshoe Trail Club, and also a member of the Advisory Committee on Hiking, visited the park on the 14th and stayed overnight. He was accompanied by Mrs. Woolman. The superintendent met them in Hilo and escorted them through the park on the 14th and 15th.

On the 24th, Territorial Delegate to Congress and Mrs. Samuel W. King, accompanied by the following congressmen, visited the park for luncheon before proceeding around the island: Reps. George N. Seger (R.-N.J,) Eugene B. Crowe (D.-Ind.) and August H. Andresen (R.-Wisc.). Misses Crowe and Andresen were also in the party.

Plans, Maps and Surveys

At the request of the local Public Roads Administration office, a study was made of the Administration’s survey report on the road section through the Footprint area. Criticisms and suggestions resulting from the study were furnished the Public Roads Administration.

CCC Engineer Foreman Wong completed a survey of the Volcano House premises to be used as a base for the operator’s development study which will be made by Landscape Foreman Mollenhoff.
General Publicity

Hilo and Honolulu papers gave front page publicity to the resolution adopted at the superintendents' conference in Santa Fe, to hold the next conference in Hawaii, provided the cost would not be greater than the Santa Fe meeting. The Honolulu Times devoted an editorial to the proposed conference here.

The park also received some fine publicity through the press coverage of an address given at the University of Hawaii by Rep. Eugene Crowe of Indiana, in which he stated that "it was lamentable that so many people of the Hawaiian Islands have not been able to see Hawaii National Park, one of the greatest parks in the world." The Crowes were here on a particularly wet and foggy day, but the park and hotel probably seemed a beautiful haven after their crossing on a Coast Guard Cutter from Honolulu during one of the worst storms in recent years.

Maintenance, New Construction and Improvements

New Construction

It is expected that the second employee's cottage (CCC project B-4) will be completed about the middle of December. Work was started on the third and last of these cottages during November. Approximately one mile of sub-grade on the Billina Pali auto trail reconstruction (CCC job B-4) was completed. At Haleakala the ranger in charge reports that nearly a mile of trail from the ranger station to the Halemau'u trail was put in. The bath house for the club camp in that section was finished, with the exception of the installation of the shower. The water system (CCC job U-2) is complete, though painting and odd jobs of interior finishing of the ranger's quarters (CCC job 308) are still incomplete.

Special Improvement Activities

In accordance with a suggestion made by Mr. Demaray while in the park the open area in front of the Uwekahuna Museum was blocked off to prevent cars driving in front of the building. The stone wall was extended and some additional parking area curbing included in the job. The park force account crew also installed a small stone platform and steps at the Thurston Lava Tube information shrine which was set on a bank usually muddy from rains, making it disagreeable for visitors wishing to examine the exhibits. In order to affect economies in expenditures for electricity the wiring in several employees' quarters was rearranged by the park crew to eliminate the use of light circuits for heat and power units. Other quarters and buildings will be studied and rewired if found necessary from time to time. Repairs to the Haleakula observation station to prevent rain water entering the building and interior painting were commenced under Ranger Powers' supervision. A staff meet-
ing was held to discuss ways and means of improving the residence area landscape by eliminating the numerous unsightly radio antenna poles. Four members agreed to foot the cost of an experimental installation recommended by Assistant Geologist Waasche, which if satisfactory, would be carried out through the area, eliminating the tenement district appearance. The Volcano House management was also requested to rearrange its radio antenna for the same reason.

During November 17 boys were enrolled and 18 discharged. Discharges included 6 for expiration of term of service, 7 secured permanent outside employment and 5 dishonorable discharges for desertion. There was a total of 79 mandays lost, 4 because of minor accidents and the remainder on account of colds, inoculations, etc. At a smoker held under the auspices of the Big Island Athletic Union three of 11 bouts were won by enrollees from this camp. However, financially the event was a success. Out of 5 football games played 3 were won. The basketball team won the first round championship in its league - winning all 5 games, and at the end of the month had won 4 out of 5 of the second round. Two safety and recreational meetings were held during the month; and the safety assistant’s report shows all safety regulations are being followed. A daily average of 170 enrollees was released to the project superintendent during the month of 21 working days. At Haleakula the foreman’s report shows a total of 415 mandays used on projects there, with a loss of 54 mandays due to bad weather and 13 mandays because of sickness.

330 - Activities of Other Agencies in the Park

330 - Co-operating Non-Governmental Agencies

Proceeding under orders from the trustees of the Bernice P. Bishop Estate, the Hilo Electric Light Company moved one of its power line poles from the Estate’s land which has recently been surveyed for house-lots and leases put up for sale, to the right-of-way at the corner of the Estate land and Hilo park entrance. This installation is both extremely unsightly and creates a traffic hazard. Request was made of the Bishop Estate to have this pole moved, but they replied it would be impossible.

330 - Donations and Accessions

At a recent meeting the members of the Outdoor Circle of Honolulu, sponsors of the Hui O Pele, voted to donate the materials for the construction of shelters at the Footprint area, labor to be furnished by the CDC. This offer is being referred through channels to the Secretary for final approval and acceptance.
The naturalist activities have been considerably reduced the last 2 months because the number of stop-over visitors is smaller and also the personnel is insufficient to handle the full schedule of hikes and auto caravans. The ranger staff assisted as usual in conducting hikes and auto caravans; and Ranger Olson continued giving his lectures twice each month on birds of the park, at Kilauea Military Camp.

Research and Observation

The month produced nothing exceptional volcanically and the local seismic index decreased steadily for 4 weeks. There was a slight shock on the 3rd and feeble ones on the 4th and 10th, all of Kilauea origin. There were reports of earthquakes in the United States and elsewhere during the week ending November 26, but no telemetries were recorded here. Dr. Jaggar spent most of the month at the University of Hawaii on special research and in connection with his forthcoming publications. While there Dr. Jaggar worked with Drs. Ballard and Sow of the University and Hawaiian Sugar Planters Association respectively, and in the chemical laboratory with Dr. Payne and Mr. Mem. Negatives of the observatory series of pictures were taken to Honolulu for special preparation of printed copies on small mounted film devised to be filed like a card catalog; the work to be paid for by the University. The Volcano Letter for the third quarter of 1939 was completed and delivered to the publisher and contains an article by Dr. Jaggar on the expedition to the lava bombing site. On November 17 lectures were delivered by Dr. Jaggar and Dr. Stanley S. Ballard at the Hawaiian Academy of Science meeting; Dr. Jaggar's subject being "Primary Gases of Volcanism" and Dr. Ballard's "Spectrographic Method for the Determination of Vitamin A in Oils." On November 20 Dr. Jaggar again lectured at the Pan Pacific Luncheon—subject "Exploration of Lava Bombing Site."

Use of Park Facilities by the Public

Travel to Kilauea headquarters amounted to 11,164 as compared with 11,926 for November 1938. At Haleakala the ranger in charge reports there were 1255 visitors as compared with 1975 for last year.

November 8 - Dr. and Mrs. James Longacre of Cincinatti. Mr. Longacre is the former Margaret Gruen, daughter of the watch manufacturer. They spent about 5 days in the park.
November 29 - Mr. and Mrs. Howard Marshall. Mr. Marshall is one of the officials of the Standard Oil Company of California, and they expect to stay until the first week of December.

600 - Protection

Night patrols of the headquarters area were initiated during November. Messrs. Frank Hjort and Reino R. Sarlin were selected from a Civil Service certificate to fill two vacancies on the ranger staff.

650 - Building Fire Protection

Quarterly inspection for fire hazards was held of all operators' and CCC and park buildings in November and requests made where necessary for the remedying of fire hazards noted.

690 - Public Health

At the same time the fire inspection was made a sanitation inspection was made of CCC and park operator's food handling facilities.

900 - Miscellaneous

While Rep. Eugene Crowe was in the islands he spoke at the regular weekly convocation at the University of Hawaii. During his talk he emphasized the need for lower passenger and freight rates between the islands, stating there should be a better opportunity for exchange of people between the islands. He said he worked on this in 1935 and is still continuing. He also stated that "the island of Hawaii should be the port of call of an ocean liner at least once a week." This office has stressed all these points for some time.

Several local orders were issued during the month designed to affect economies in the appropriation so that no essential maintenance or other work might be jeopardized. Official travel requiring per diem was ordered kept to a minimum and would be authorized only when urgent. With the exception of the clerk-telephone operator no new authorized positions are to be filled until March 1, 1940.

Along with the general inventory of park property which has been in progress throughout the year Ranger Winter completed an inventory of government property at the Volcano Observatory. This was an exceedingly tiresome job requiring tedious search through 20 odd years of records of equipment purchases, etc., and identification of existing equipment, all of which had to be segregated from the many pieces purchased from Research Association funds. While probably not entirely correct, Ranger Winter is to be complimented on bringing some order out of this apparently hopeless jumble. The inventory disclosed that the government owned several thousand dollars more equipment at the Observatory than was believed.
This office received a request from a local clergyman to consider the erection of a church building in the park for the local community. The matter was considered and the clergyman informed that there did not appear to be sufficient need for the building to justify its construction in the park.

On the 17th a flock of 12 iwi were seen in a 5-acre blooming manani grove at the 6400 elevation along the Mauna Loa trail (Bates). This same grove held only one iwi on the following day. Five oman were seen from the 7300 to 8500 elevation along this same trail.

On the 17th a flock of 12 iwi were seen in a 5-acre blooming manani grove at the 6400 elevation along the Mauna Loa trail (Bates). This same grove held only one iwi on the following day. Five oman were seen from the 7300 to 8500 elevation along this same trail.

One io was seen at the 5500 elevation along the Mauna Loa truck trail on the 17th and 18th. This is a new locality for this bird. The io are now rarely seen along the chain of oratera, but frequently in Kilauea Iki and Kipuka Fasulu. The hawk at the 4500 elevation rapidly gained elevation upon seeing us and disappeared in the clouds about 2000 feet above." Quoted from Ranger Olson's report.

Edward G. Wingate
Superintendent
Entrance to Hilina Pali auto trail at Chain of Craters road junction. Auto trail under reconstruction by OCS, job No. R-4
Hilina Fall auto trail reconstruction. Small fill of coarse rock later covered with No. 2 rock from crusher and gravel surfaced.
Two views of portable rock crushing plant in operation on Hilina Fall auto trail reconstruction.
Information shrine, Thurston Lava Tube. Temporary exhibit and recently constructed rock steps and platform.
Two views of landscape planting of small ferns and shrubs on grass slopes along Kilauea rim road. Work done to eliminate formal appearance of roadside.
### United States
#### Department of the Interior
##### National Park Service

#### Travel Report

**Kilauea Section, Hawaii**

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<th>This Month Last Year</th>
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<th>Percent</th>
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<td>24,494</td>
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<td>Persons entering via trains</td>
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<td>Persons entering otherwise</td>
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<td><strong>Total other transportation</strong></td>
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<tr>
<td><strong>Grand Total All Visitors</strong></td>
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#### Travel to Date

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<th>Increase</th>
<th>Number</th>
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**Automobiles in public camps during month:**

**Campers in public camps during month:**
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

Haleakala Section, Hawaii National Park for the month of November, 1959

<table>
<thead>
<tr>
<th></th>
<th>This Month</th>
<th>This Travel Year To Date</th>
<th>This Month</th>
<th>Last Travel Year To Date</th>
<th>Increase for Travel Year</th>
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<tr>
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<tr>
<td>Cars first entry,</td>
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<tr>
<td>Cars reentry,</td>
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<tr>
<td>Motorcycles,</td>
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<tr>
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<td>*251</td>
<td>275</td>
<td>302</td>
<td>1371</td>
<td>*612</td>
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<tr>
<td></td>
<td>decrease</td>
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<td>Persons entering via motor vehicles,</td>
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<td><strong>3750</strong></td>
<td><strong>1975</strong></td>
<td><strong>6655</strong></td>
<td><strong>3095</strong></td>
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<tr>
<td><strong>OTHER TRANSPORTATION:</strong></td>
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<tr>
<td>Persons entering via stages,</td>
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<td>Persons entering via trains,</td>
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<td>Persons entering otherwise,</td>
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<td>Total other transportation,</td>
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<td><strong>1975</strong></td>
<td><strong>6655</strong></td>
<td><strong>3095</strong></td>
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<tr>
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<td><strong>3750</strong></td>
<td><strong>1975</strong></td>
<td><strong>6655</strong></td>
<td><strong>3095</strong></td>
</tr>
</tbody>
</table>

Automobiles in public camps during month, 
Campers in public camps during month, 8
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

Nailuku, Maui
December 1, 1939

Memorandum to Superintendent E. G. Wingate
through office of the Chief Ranger.

Enclosed are the weather reports, travel report, and
narrative report for the month of November, 1939, for the
Haleakala Section.

H. A. Powers
Ranger in Charge
Memorandum to Superintendent H. G. Wingate through office of Chief Ranger.

The following narrative report for the Haleakala Section for the month of October is respectfully submitted:

000 General

010. Rains obligingly filled all the storage as soon as the water system was finished. Hot baths are now in order.

020. Light frosts have greeted early risers at the camp on two mornings this month. During November 5 to 14, we had disagreeable trade wind rain. The last two days of the month were mild Kona with only a small amount of rain. There were 13 clear days at the summit and 8 cloudy days. Rain at the summit amounted to 2.99 inches. There was heavy frost several mornings. Clear and cloudy days at the camp were the same as at the summit. Rain at the Ranger Station was 3.45 inches. Minimum temperature was 42 on two mornings. Up till November 24, there was 10.6 inches of rain at Paliku. The Kona added more, but it will appear on next month's record.

200 Maintenance, Improvements and New Construction

210 Maintenance. A strong trade wind storm, followed by a Kona wind rain storm gave opportunity to check carefully on the leaks in the Pakaloa Observatory. Using marine putty, asbestos roof cement, mortar, and some linoleum cement, we hope we have sealed most of the leaks both inside and outside of the walls. The interior is repainted and looks much more attractive and bright.

One CCC gang has started repairing the ditches and culverts on the road. So far it has been mostly cleaning out as we have no cement for the job as yet.

230 New Construction. The trail gang has put in nearly 1 mile of trail from the Ranger Station toward the Haleakala Visitor CCC bath house is all finished but the installation of the shower bath. Hot water heater and tank seem to be satisfactory. The water system is completed. Cesspool at the Rangers' quarters will be completed with one more days work. Painting and odd jobs of interior finishing have taken lots of time but make very little showing on record in the house.

500 Use of Park Facilities by the Public.

510. Auto travel was 251 cars for the month. Some bad weather held down the number of visitors.

600 Protection

640. Eight goats, five female and 3 male, were destroyed.

H. A. Powers
Ranger in Charge
MEMORANDUM FOR THE SUPERINTENDENT:

The Chief Ranger's narrative report for the month of November, 1939, follows:

**Introduction.**

No events of outstanding importance occurred during the month of November. Travel was good due to the several organized groups and high local visitation on the two holidays.

**120 - Park Inspections.**

Practically the whole park was covered by patrols by rangers and the junior warden. One trip was made to Puu Ulaula and all fences in the vicinity of Kipuka Hi and Six Tanks were patrolled. The Keu Desert Trail between Uwekahuna and Mauna Iki was traversed and 3 trips were made into the Mauna Iki area in hunting goats. The Hilina Pali, Kipuka Hone, Kona and Halema districts were gone over during goat-driving operations in these places.

**230 - Improvements.**

Center-line striping was done at the headquarters intersections and on the filled curve between Uwekahuna and Halemaumau. Several more traffic control signs were also installed and some work done on trail signs by the rangers.

**436 - Observations.**

New snow was seen on Mauna Kea, Nov. 9th and on Mauna Loa, Nov. 12th.

**520 - Visitors.**

The following groups were contacted by the ranger division:

- Pahala School, 46 visitors.
- Kahalae YWCA, 26
- Football group, 32
- 4H Club, 20
- US Cruisers, 50
- Fernandez Circus, 26

**620 - Police Protection.**

Nightly patrols were made in the headquarters, utility, CCC and
Volcano House areas. Patrols were made of all park roads, grounds and buildings several times each week.

650 - Building Fire Protection.

The quarterly self-inspection for fire hazards was held at Volcano House, park buildings and the CCC Camp, during the month.

680 - Accidents.

One ranger's safety meeting was held during the month.

690 - Public Health.

The quarterly sanitation inspection of operators and CCC food handling facilities was made.

800 - Miscellaneous.

283 predatory wild goats were removed or otherwise destroyed during the month. 3 hunting trips were made into the Mauna Iki district but no goats were met with.

One meeting of the Board of Survey was held at the CCC Camp.

One meeting of the Roads and Trails Committee was held to consider specifications for the reconstruction of the Kau Section of the Belt Road.

Several complaints have been made by park employee radio users concerning electrical machines and gadgets used by neighbors without noise-eliminating transformers. This radio noise is at present considered to be Public Enemy No. 1 in this locality as are the owners of the said equipment. These owners, if properly notified, should be willing to equip their sewing machines and razors with the necessary transformers as they are not costly.

It has been suggested that bulletin boards be installed at Volcano House, Military Camp, Front Office Lobby and Uwekahuna Museum for the Asst. Naturalist to list his special activities, etc. This could be handled by Mr. Fagerlund and Mr. Quick and as no new materials will be needed, it is suggested that a work-order be issued for this job.

Joseph H. Christ,
Chief Ranger.
Memorandum to the Superintendent,
Through the Chief Ranger.

Narrative report for the Month of November.

Seven days were spent in completing the observatory inventory and report was submitted to your office.

Five days were spent in routine patrol, ½ of which were patrols to Elaina Pali to deliver feed and to destroy goats, none of which were observed, however.

Five and one-half days were spent off duty.

Two hikes to Mauna Iki with 22 Military Camp people were conducted. Assisted in handling US Navy tours all day Nov. 11th, and one half day Nov. 12th. One special tour of KMC visitors, 2 cars and 18 people was conducted. Three half days were spent on Museum duty, the other half-days spent in Observatory routine. Five half-days were spent on Observatory routine, during which time several adjustments and repairs were made on seismographs.

Was on dance duty on the night of November 25th, at the Volcano House.

Two "No Parking" signs were mounted and installed in front of the Headquarters Building. Ranger Olson and I installed 3 signs, moved two, and replaced 2 signs on November 15th. Laid out and painted new "Danger, Rock Trucks" sign, large size.

During the last month I have repaired to tilt and traverse mechanism on the Bell and Howell tripod so it will operate, repaired drum for Mauna Loa seismograph, made sketches for remodelling Dr. Ellers tilt recording instrument and spent ½ day making support mechanism for the tilt recorder weight, ½ day going after, shortening the Mauna Loa driver so it will be almost "fool-proof" and returning and installing same. Turned armature commutators for two auto generators for machine shop.
MEMORANDUM FOR THE SUPERINTENDENT THROUGH THE CHIEF RANGER.

The highlights of the months' work are as follows:

Nov. 6, one showing was made of Krakatoa and the bird slides at KMC to 83 persons.

Nov. 9, Made sanitary and fire inspection at Volcano House, Photo Studio and Volcano Observatory and submitted reports on same.

Nov. 10, Conducted tour for Pahala School group of 46.

Nov. 11, Conducted Inter Island tour, 10 persons in 3 cars.

Nov. 11, 12 & 13, Assisted with sailors from 2 US cruisers.

Nov. 14, Measured Kau Desert Trail from Crater Rim Trail to Mauna Iki and Footprints parking area, 8.9 miles with measuring wheel.

Nov. 16, Performed 2 superintendents' reports and made notes.

Nov. 17-18, Made trip to Puu Ulaula with kerosene, gasoline and for patrol. Repaired clogged sewer at resthouse.

Nov. 19, Conducted Mauna Loa Tour for 17 persons in 4 cars.

WILDLIFE NOTES.

On Nov. 17th a flock of 12 iiwi were seen in a 5-acre blooming memani grove at el. 6400 along the Mauna Loa Trail (Bates Trail ??Bryan). This same grove held only one iiwi on the following day. 5 omao were seen from el. 7300 to 8500 along this same trail.

One io was seen at el. 5500 along the Mauna Loa Truck Trail on the 17th and 18th. This is a new locality for this bird. The io are now rarely seen along the Chain of Craters but frequently in Kilauea Iki and Hipaka Puauha. The hawk at el. 5500 rapidly gained elevation upon seeing us and disappeared in the clouds about 2000 feet above us.

A flock of 9 house finch (linnet), were observed at the Puu Ulaula garbage dump. 2 omao were also heard nearby in song from this same location in the early morning of Nov. 18th.

Gunder E. Olson,
Ranger.
MEMORANDUM FOR THE SUPERINTENDENT

THROUGH CHIEF RANGER CHRIST

SUBJECT: Ranger Report for the Month of November

Duties:

On Nov. 15, the monthly report for October was written and typed.

Regular turn was taken at such routine duties as 24-hour duty, flag, and night patrol.

In order to allow a more satisfactory division of duties the undersigned worked from 7 AM to noon and from 1 PM till 4 PM. This made possible both tending the seismographs and tending the museum in the same day—all day (alternating with half days which were the result of making trips up to the Mauna Loa seismograph).

The equivalent of 7½ days was spent in the Hawaiian Volcano Observatory duties.

10½ days were spent on museum duty at Uwekahuna. While on duty at the museum over 75 visitors were actually contacted and given explanations and information. While on duty some repair work was also done on the relief model and considerable time was spent in making new and uniform descriptive labels for exhibits and in working on museum catalogue cards.

4 days: Nov. 15, 22, 23, and 25 were spent in the Hilina Pali-Halape region with Chief Ranger Christ in preparation for and in the execution of a goat drive. On these days Ranger Minter substituted in the discharge of museum and observatory duties.

Three lectures were made to 52 persons at Uwekahuna. Two were also made to a total of 800 persons aboard the cruisers U.S.S. Pensacola and the U.S.S. Northampton on the evening of Nov. 11 in Hilo Bay.

Some work was also done on the park ornithological collection. One mouse was caught and prepared as a study skin at Uwekahuna for the park mammal collection.

Two press releases were issued as of Nov. 3 and 29.

Twelve letters (initials) 3 to 8 feet high made by soldiers on the step fault blocks of Uwekahuna Bluff were obliterated.

Comments:
Comments:

1. At present wind blown dust filters into the museum display cases. Therefore about 2 pounds of putty are requested with which to remedy the situation. Also about two pounds of plaster of Paris is requested with which to complete the job of repairing the Uwekahuna relief model. Both of these jobs can be handled while on museum duty.

2. For at least two months tennis has been advertised as a facility available to guests at the Volcano House. To my knowledge no net has as yet been made available to the public.

3. The following items it is noted were all well and quickly done:
   - Replacement of Uwekahuna Museum window panes.
   - The painting of traffic lines at Headquarters intersection.
   - The painting of center line at the filled turn on the SW rim of Kilauea Crater.
   - The last two items especially make for greater safety. The curve signs put up at the curve referred to above are also an improvement even though the arrows show only a 45° instead of a 90° turn as is really the case.

4. The stone platform built in front of the Thurston Lava Tube trailside shrine is a great improvement.

5. The obliteration of extra roads on Kilauea Crater floor is a fine idea. However the new road to the west camoscope is poor—impert much rougher than the original. Obliteration work is poor and incomplete. It present the new road is merely one extra instead of the only road.

6. William Emo, the Hawaiian boy at Uwekahuna is very satisfactory even though he may not be quite all that is to be desired as regards initiative in work. It is felt that it is far better to have a Hawaiian boy than an oriental or a haole boy. Even though the CCC boy is now instructed to do little or no contact work, he "fits into the picture". William Emo is courteous, careful, and wide awake mentally, and is glad to tell one about Hawaiian customs and beliefs.

Days Off:

A total of 7 days off were taken as follows: Nov. 7, 11, 14, 16, 18, 22, 30. However on the evening of Nov. 11 six hours were put in making a trip to Hilo and lecturing on board visiting U.S. cruisers.

Wildlife and Natural Phenomena:

Outside of the goat-drive there is nothing of special interest to report. The mananias are now blooming profusely and moss have started.

Mauna Loa rain gage readings were as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Rainfall (in)</th>
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<tr>
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<td>.17</td>
</tr>
<tr>
<td>8</td>
<td>.23</td>
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<tr>
<td>10</td>
<td>.43</td>
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<td>24</td>
<td>.04</td>
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<td>28</td>
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</tr>
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</table>

Paul Ernest Schulz
Park Ranger
MEMORANDUM FOR THE SUPERINTENDENT THRU THE CHIEF RANGER.

Subject: Narrative report for November.

Routine flag, patrol, and switchboard assignments were carried out.

I assisted in the quarterly fire and sanitation inspection at the CCC Camp, and the fire inspection for the headquarters area. Separate reports have been submitted for this work.

During the month I repaired the telephone instrument in Mr. Rennie's quarters and rebuilt one instrument for use as an extra. I spent one day with Foreman Quick in going over the Park telephone system. I have spent some time on the framing and bolting of the serial poles to be used for Mr. Wessche's transmitter. Foreman Quick and I repaired the heating element for the oven of our electric range. The first aid kits in our park cars have been refilled to standard.

One patrol trip to Hilina Pali was made during the month.

I have attended two meetings of the training school for Scouters being held at Olua.

Signed:

Arthur L. Jess
Park Ranger.
Edward G. Wingate, Superintendent
Hawaii National Park

SUBJECT: Report of the Hawaiian Volcano Observatory
November 1939

Dear Mr. Wingate:

The month of November produced nothing exceptional volcanically and the local seismic index decreased steadily for four weeks. Mr. Jaggar spent most of the month at the University of Hawaii laboratories in Honolulu, and Mr. Watson was engaged in improvement of seismographic time service and of instruments. The Kilauea Laboratory of the University of Hawaii was made habitable with new furniture.

A correction in the report for October under the heading Puu Ualsula Expedition is that Ranger Jess accompanied the Jaggar party at the East House, remained with them throughout the trip and did much of the work as a scientific assistant.

Volcanic Activity of the Month

The following were the local data for the month:

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<tr>
<th>Week ending</th>
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<th>Slides</th>
<th>Crack openings</th>
<th>Local tremors &amp; quakes</th>
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<td>10.50</td>
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<tr>
<td>12</td>
<td>6.75</td>
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<td>4.0 mm. closed</td>
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<td>19</td>
<td>6.50</td>
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<tr>
<td>25</td>
<td>3.75</td>
<td>0</td>
<td>2.0 mm. opened</td>
<td>15</td>
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</table>

There was a slight shock November 5 and feeble ones November 4 and 10 all of Kilauea origin. There were reports of earthquakes in the United States and elsewhere during the week ended November 25 but no teleseisms were recorded here.
Dr. Jagger worked in the new office assigned to the Kilauea Laboratory of the University of Hawaii in Honolulu, Hawaii Hall No. 8. Tables and bookcases were installed, and desk and filing case ordered by the University. The first week was spent in placing orders for photostat work on the illustrations of Geological Society memoir, on conferences with the spectroscopists Ballard and Gow of the University and Sugar Planters' Association respectively and in work at the chemical laboratory with Dr. Payne and Mr. Mau. Mr. Mau is working with 1939 lava of Mauna Loa in quantitative analysis and in special experiments prolonged for weeks on the decomposition of such rocks in the presence of carbonic acid gas and sulphur dioxide. Dr. Payne has recently returned from Washington, D.C., where he learned at the Bureau of Standards of new apparatus sensitive for detecting hydrogen gas electrically by reason of its extreme conductivity.

Negatives of the Observatory series were taken to Honolulu for special preparation of printed copies on small 2X2 inch mounted film devised to be filed like a card catalog, and to be projected instantly as a positive for purposes of tracing or study. This method makes it possible to copy anything large or small in the files of the Observatory, from a motion picture film to a large map, and classify it separately in card illustration form at small expense. This work will be paid for by the University in respect to the copies filed in the University laboratory, which will also be the Honolulu laboratory of the Hawaiian Volcano Research Association. With reference to the record books of the Hawaiian Volcano Observatory, the carbon copy will be kept in the University laboratory, so that in case of fire at Kilauea, there will always be a duplicate in Honolulu. Incidentally the small positive of photographs makes it possible to copy the negatives by the Leica system of any amateur or professional photographer who has ever taken pictures in any year of the Hawaiian volcanoes. The 2X2 positive is quickly reproducible as a larger negative in case of loss of original negatives.

The Volcano Letter for the third quarter of 1939 was completed and delivered to the publisher, and contains an article by Jagger on "Expedition to Lava Bombing Site" with eight illustrations, the frontispiece copied from a Kodaehrome showing bomb crater with upstanding edges and pahoehoe ring and torrent of released lava at Target No. 2, elevation 8,800 feet.

The spectroscopic work on eleven specimens of lava flows from Mauna Loa of different years was vigorously begun by Messers Ballard and Gow, using both the small Gaertner spectrograph belonging to the National Park and the large one of H.S.P.A. Mr. Mau powdered the rock specimens by clean chemical methods and one of these was put through preliminary tests of vaporizing in carbon arc and making spectrograms once a minute for ten minutes. This showed on a ten-milligram sample the appearance of new elements in the spectroscopic lines every few minutes, and some of this appeared even in the small instrument. The work in Honolulu continues and a final plate will be made showing eleven spectrogram strips side by side for the eleven specimens, to indicate which of these of different Mauna Loa ages, are different from each other chemically. This is an entirely original method of research in petrography.
On November 17 a lecture was given at the Hawaiian Academy of Science on the "Primary Gases of Volcanism", and on November 20 at the Pan Pacific luncheon on "Exploration of Lava Bombing Site".

Conferences with Dr. Eller concerned his new and improved instrument for measuring tilt, and he expects to return to Kilauea for the Christmas holidays. Some experiments were made with his advice and the assistance of photographer Miyamoto of the University on the use of an F.1.5 Leitz lens in inspection of zenith stars for overcoming difficulties in the month instrument recently designed here for determining celestial coordinates.

Several conferences were held with University officers on the subject of the recent monthly collections of gas at Sulphur Bank. The funds of the University are sufficient to permit extension of the chemical work at Kilauea after July 1, 1940. Along three lines respectively gas collecting, spectroscopy and rock analysis, chemistry comes next to crater observing and seismology in our work, and Payne and Ballard will shortly make a report. Dr. Emerson accumulated apparatus for analysis here and Dr. Ballard apparatus for glass blowing and spectroscopic work. All of us have collected sublimates, rocks, minerals, and gases for twenty-five years, we have the Spalding collection of minerals, and the time has come for adding a University assistant in chemistry to our staff and providing a laboratory for him. This may be done next summer temporarily in the back room of the University Building. If this plan has your approval, it will be discussed with Presidents Crawford and Atherton when they return from the Coast in the near future.

Work of the Assistant Geologist

Mr. H. H. Wasche reports that on November 2 he made an inspection trip in Kilauea Crater with Chief Ranger Christ to locate a new automobile trail to the West Tilt Station at Halemaumau. With the aid of Yasunaka he set up a Howard clock for preliminary adjustment to replace the clock at Hilo seismograph station. By the end of the month two Howard clocks were in running order and ready for installation at Hilo and Kona stations. The time break on the Observatory regulator was made to open on the sixtieth second instead of the fifty-ninth for more accurate timing.

On November 8 a radio noise eliminator for the small shop grinder was built in accordance with the request of the Radio Inspector. On November 12 the ohm-meter used for blasting tests of the C.C.C. Camp was repaired.

Beginning November 15 shopwork was started with the aid of Ranger Minter in making improvements on Dr. Eller's tilt meter and these will be checked by Dr. Eller when he arrives at the end of December.

Assisted by Sato, Mr. Wasche worked up the 1922 and 1923 tilt calculations, with a view to preparing tilt charts for these two years in completion of the series of charts that were executed by Dr. Powers for Vulcanologist Jaggar. These plates were made.

Gas at the Sulphur Bank was collected for Dr. Ballard on November 17. On November 25 Mr. Wasche addressed a staff meeting of the Park at the Superintendent's request explaining methods of eliminating unsightly radio
aerial antennae for improving the landscape, and working up a system to accomplish this.

The regular routine was carried forward on tilt, seismograms, weather, angles, cracks and location of October earthquakes. Eight morning field trips were conducted and six trips to the Mauna Loa station. The Safety Committee meeting on November 30 was attended at Park Headquarters.

Work of the Assistants

A. Okuda made great improvements in the University of Hawaii building constructing two large cases of drawers for specimens and six glass cases for instruments as well as small furnishings.

S. Sato continued to catalog and file the library and the seismograms and assisted Mr. Neesche in scientific work.

H. Yasunaka assisted with instruments and in outdoor and indoor work about the University building. Some unsightly and unsanitary features of the use of the tank water there have been eliminated.

Ranger Winter continued his machine shop work on seismographs, annunciators and tilt instruments.

Visitors

November 10 Dr. and Mrs. Longacre of Cincinnati, Ohio.


T. A. Jagger
Principal Scientist
REPORT OF CAMP DIRECTOR FRANK C. HUSTON CCC HNP TO PARK SUPERINTENDENT EDWARD G. WINGATE, HAWAII NATIONAL PARK FOR THE MONTH OF NOVEMBER, 1939.

During the month we enrolled 17 boys and discharged 18, six were discharged for expiration term of service, seven secured employment on the outside, five dishonorable discharges for desertion.

One boy transferred to the side camp at Maui.

There was a total of 79 mandays lost during the month due to sickness, 4 mandays due to minor accidents. The balance due to colds, inoculations, etc.

The recreational officers report for the month shows that the boys were very active in sports. A smoker was given on November 4th, winning three out of the eleven bouts, but financially it was a success.

Five football games were played and we won 3 games and lost 2.

The basketball team won the first round championship, winning all five games and have won 4 out of five games in the second round.

The boys keep up training in all activities as much as the weather will permit.

Two safety and recreational meetings were held during the month.

The safety assistants report shows all safety regulations are being followed.

All fire equipment and electric wiring was inspected and found to be in good condition.

The Project Superintendent report shows an average of 170 enrollees released to him during the month of 21 working days making a total of 3570 mandays worked on the projects.

Jobs.

B-4 Employees Cottages

100 mandays used on this job, the second cottage will be finished about the middle of December and work has been started on No. 3 cottage.

R-4 Hilina Pali Auto Trail

1482 mandays used here, approximately one mile of sub-grade completed.

249 F Field Planting, Kilauea

223 mandays used here

319 Landscaping, Headquarters Area

362 mandays used on this job
Jobs continued

321 Sewage Disposal System

152 man-days used on this job.

324 Removal of Exotics.

541 man-days used on this job in Bird Park

Work continued on some ten other jobs in the Park.

The Project Superintendent reports all jobs progressing satisfactorily.

HALEAKALA SIDE CAMP, MAUI

The foreman's report shows a total of 415 man-days used on projects here, with a loss of 54 man-days due to bad weather. There was a loss of 13 man-days due to sickness.

Work continued on the water system, Horse Trail, Ranger Cottage and Paving of gutters.

Dr. Jones inspected the camp on the 9th of the month.

Dr. Chang made his regular weekly trips and inspection to this Park. No report received as yet from Dr. Chang or Dr. Jones.

Enough water fell during the month so we can now let the enrollee have their showers.

Respectfully submitted,

Frank C. Huston,
Camp Director,
CCC HNP
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FILE NO.

MONTHLY REPORT
OCTOBER 1939

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.

ARIO B. CAMMERER,
Director.
MEMORANDUM FOR THE DIRECTOR:

There follows the report of activities in Hawaii National Park for October.

020 - General

With the summer rangers all gone, the number of visitors decreasing and the volcanoes, like the "western front", remaining quiet, October was a more or less dull month. The only excitement was that offered by the visit to Honolulu and Hilo of the two Japanese Navy Training Ships, HIJNS Iwate and Yakumo, from one of which a sailor deserted and is now being held in the Hilo jail pending disposition of his case by Immigration authorities. Local sentiment, apart from that of citizens of Japanese ancestry, is strongly in favor of the sailor, a Japanese, being returned to Peru where he was born. The remainder of the excitement was due to the posting of signs on the docks at Hilo, at the gangway to the ships reading "Salute the Sentry." This, several persons having business on the ships, refused to do and considerable fuss was made in the local papers about the incidents. It was explained that "salute" had several meanings and it was not intended that a military salute should be given. So far no one has been able to find out who ordered the signs made and those investigating have been given quite a run-around. While in the park the personnel from the ships behaved in an exemplary manner which we regret cannot be always reported about that from our own ships.

The rather quiet month gave time for field study of two important projects - erosion control in the Hila Pali area and protection for the footprints in the Mauna Loa desert. Considerable progress was made on revision of the master plan and work project program.

020 - General Weather Conditions

At Kilauea the weather was excellent throughout the month, with only a few days that were inclement. Maximum and minimum temperatures at Kilauea were 78 and 52 degrees respectively, precipitation 5.27", and maximum wind velocity of 20 mph on both the 12th and 25th. On the 27th the eclipse of the moon, which was almost total, was observed between 6 and 10 p.m. as the evening was extremely clear.
At Haleakalak the ranger in charge reported that precipitation at the observation station was 1.69" and 1.82" at the ranger station. Frost was reported at the observation station on the morning of the 29th.

110 - Superintendent’s Special Activities

The superintendent left for Honolulu on the 22nd, returning by way of Mani, on November 1. The main object of the trip to Honolulu was to inquire as to the possibility of the Hui 0 Pele providing funds for purchase of materials for construction of a museum shelter at the Footprint Area — construction to be undertaken as a CCC project. This plan was agreed to by the Outdoor Circle, sponsors of the Hui 0 Pele and request submitted to the Director’s office for acceptance. While on Mani inspection was made on October 30 and 31 of CCC projects underway at Haleakale, and study made of proposed water system at the summit to serve the developed area at the road terminus.

October 3 - Made complete inspection CCC camp and equipment, including, with the chief ranger, an inspection of the camp fire protection methods and equipment. Defects noted were recommended for immediate correction.

October 5 - Inspected experimental plots for ohelo berry reproduction on the “steaming flats” and natural manane reproduction on lower Wainana Loa slopes.

October 7 - Attended regular quarterly dinner and business meeting of the Hilo branch of the Federal Business Association, held in Hilo.

October 10 - Went over area west of Hila Kahi shelter with Park Naturalist Fagerlund, CCC Project Superintendent Bennie and Landscape Foreman Mollenhoff, where erosion control project is to be undertaken.

October 13 - Inspected sites selected in Footprint area for construction of proposed shelters and made additional selections.

October 15 - Inspected special project area project with Assistant Superintendent Noimat, Park Naturalist Fagerlund, Chief Ranger Christ and Landscape Foreman Mollenhoff. Accompanying the party were Mr. Albert Judd and his son. Mr. Judd is an authority on Hawaiian lore.

Routine inspections were made from time to time of CCC projects and park roads and public facilities. It was necessary to order the CCC to do over considerable finishing work on the fifth employees’ quarters delaying completion for a few days.

110 - General Publicity

At the request of the editor of the Kawaz, local Japanese newspaper, the superintendent wrote a letter of welcome to the officers, cadets and men of 2 Japanese Navy training ships — namely the I-ate and Yakumo, which were visiting island ports on a goodwill tour, before returning to Japan.
One of the laborer's cottages being constructed under the CCC, job B-4, was completed, the second was 60% complete and work on the third was started. The fifth employee's quarters, job 306, was also completed, and the 8th, located at Haleakala, complete except for inside painting, which was proceeding slowly because of the inexperience of the CCC enrollees. On the 19th work was started on realignment of the Hiliina Pali truck trail, CCC job E-4. A temporary water shed was constructed at the Mauna Kea footprint area, in preparation for future construction of a museum shelter at that point, job E-19. At Haleakala the foreman in charge reports that the water system, job U-2, is progressing nicely with one mile of 12' pipe laid, the 10,000 gallon fire storage tank, and the 10,000 domestic storage tank at the ranger station installed. The system was in excellent shape when inspected by the superintendent on October 30.

CCC - Forty new boys were enrolled, and 9 discharged - 8 honorable and 1 dishonorable. Two of the honorable discharges were for securing outside employment, 5 for expiration of enlistment, one needed at home and the dishonorable discharge for continually being AWOL. Due to operations, minor accidents and sickness 104 men were lost; 4 for minor operations, 4 for minor accidents and the remainder for colds and miscellaneous causes. Sports interest centered around football, with the 140-lb. team in third place in the HRC league and the 130-lb. team tied also for third place. The basketball team came out the champions in the first round of the HRC Businessmen's League, winning all their games. The boxers are training for the smoker to be held in Hilo the first week in November. Two safety meetings were held during the month, attended by all enrollees and personnel of the camp. The project superintendent reports a daily average of 149 enrollees released to him during the month of 22 working days, making a total of 3280 men days worked on projects. Dr. Clyde M. Phillips, physician and surgeon for the camp, left for the mainland during October and Dr. Chang of Hilo is taking his place. At Haleakala the foreman in charge reported 348 men days worked on projects, with a loss of 54 men days due to bad weather. One safety meeting was held at this camp.

300 - Activities of Other Agencies in the Park

320 - Cooperating Governmental Agencies

The Post Office Department advertised for applicants for the position of postmaster at Haleakala following up resolution presented by the Maui Lions Club for a postoffice at the summit.
330 - Cooperating Non-governmental Agencies

Permission was given by the Mutual Telephone Company for the park to use its poles along the Manalolo highway to string an extension line through the Footprint area to the new west entrance to the park.

400 - Interpretation

420 - Museum Activities

With the beginning of the month the museum required attendance by a member of the regular staff as the use of ECC enrollees for the purpose had to be discontinued by Washington orders.

430 - Research and Observation

433 - Geology: The month was without special volcanic events. Dr. Jaggar made an expedition to Puu Ulauma (10,000 foot elevation on Muna Loa): a statement of the volcanologist's plans for the ensuing year was prepared and progress made with new instrument improvements and manuscripts and illustrations. Dr. Jaggar continued work on the "Crater" manuscript. Specimens in large numbers have been collected at the observatory and to make them available for special chemical studies more specimen cases are being built. On the 30th a conference with Dr. Hance in charge of the chemical laboratories of the Hawaiian Sugar Planters Association, led to an offer by him to make chemical tests with the spectograph, having in view identification of dates of flows. Dr. Jaggar left for Honolulu on the 28th, planning to do special work at the University throughout November. While at Puu Ulauma Dr. Jaggar studied several of the flows emanating from Muna Loa, collected specimens and photographed them. It is proposed to test the spectograph lines of rare elements in all the flows of different ages.

500 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

There was a total of 14,418 visitors at Kilauea during October as compared with 11,634 for October 1938; and at Haleakula the ranger in charge reports 2506 visitors to that section as compared with 4370 for last year.

520 - Visitors

The only important visitors were Mr. Albert F. Judd and his son Albert III, who spent a week at the Volcano House. Mr. Judd is head of the board of trustees of the Bernice P. Bishop Estate in Honolulu and an authority on things Hawaiian.

There were also approximately 2000 officers, cadets and men from 2 Japanese Navy training ships - HIJMS Iwate and Yakumo, and their crew.
tanker, HJMS Shiretoko - October 25-29, who made the trip to the park on these days. These ships were on their way back to Japan after completing a goodwill tour of some of the Pacific coast ports of the mainland, and various Hawaiian ports.

600 - Protection

660 - Insects and Tree Diseases

Very little fern weevil control was accomplished during October because the excessive dampness of the fern forests made working in these areas disagreeable.

Edward G. Wingate
Superintendent
Sheet erosion in Kikua fall region. Country denuded by rains permitting scarring away of soil during heavy rains exposing underlying phosphate. Several thousand acres have been destroyed in this section.
Another scene of stream erosion, Hilo Nali section.

Flood water erosion, Hilo Nali section.
All that remains of about 3 feet of good soil where floods in the Kau desert have swept large sections bare of all soil.
Asplenium ferns which have been killed by fern weevil (*Spegrius fulvitaris* Pascoe)
Personnel of HIJMS Iwate and Yekumo, and oil tanker HIJMS Shiretoko who visited the park October 25 to 28. This visit precipitated two incidents which met with widespread press comment.
Employee's quarters constructed by OSC, park residential area, Job 308. Only one more of these quarters remains to be completed.

Completed laborer's cottage, C-6, Job B-4.
Memorandum for the Superintendent:

The Chief Ranger's narrative report for the month of October, 1939 follows:

010 - Introduction

The month's outstanding event was the visit of 2000 officers and men of the Japanese Navy training fleet. This personnel was transported through the park by local private cars. All available ranger division members were utilized to park cars and otherwise facilitate traffic on the 3 days, Oct. 25, 26 and 27. On Oct. 25 and 26, the visiting caravan numbered 400 cars each. No accidents were reported within the park even with this unusually heavy traffic.

120 - Park Inspections

Patrols were made during the month to Kaone, Na Pua Hemaakule, Great Crack, Kauakia, Papelau Footprints area, lower Kipuka Nene and along Hilina Pali. Junior warden Medieros also spent the month patrolling the seacoast section of the park. Two trips were made to Puu Ulaula to establish and remove the Dr. Jaggar expedition which stayed at the resthouse for 4 days.

210 - Maintenance

Some maintenance of roads and shoulders was done by park laborers during the month.

220 - New Construction

The inside parking area at Uwekahuna Museum was graded and curbing installed to protect the ornamental shrubbery and to facilitate parking.

It is recommended that the road in front of the entrance to the lava be regraded and leveled to facilitate parking during heavy traffic as was experienced during the Japanese Navy tour. The super elevation on this curve is too great causing difficult maneuvering.
of cars in and out of parking spaces. One reason for this is that Hilo cars have carburetors set for sea level elevation and naturally give some trouble in starting at this elevation, when cold. The lower edge of the paving should be raised at least 1 foot and a suitable stone wall should be constructed here to prevent cars going over the bank.

230 - Special Improvement Activities

The telephone line was extended from the old Kau entrance 3.5 miles to the new entrance. A telephone was installed at this end of the line.

430 - Botany

Mamani and Aalii seedlings have been noticed coming up in profusion in the Kipuka Nene area. Goat browsing in this locality has almost stopped and the growth of grass and other vegetation is now little damaged by grazing.

520 - Visitors

Among the prominent visitors contacted by the ranger division were:

Mr. Fox, executive of the S. H. Kress Co.
Mr. Albert Judd, Trustee of Bishop Museum and Bishop Estate of Honolulu.
Mr. Albert Judd III, his son.

620 - Police Protection

Nightly patrols were made in the Headquarters, Utility and CCC camp areas. Patrols were made of all park roads, grounds and buildings several times weekly. Four motorists were given reprimands for traffic infractions and two were given assistance.

630 - Wildlife Protection

Twenty-one mongoose and nine rats were trapped in Bird Park with the cooperation of CCC.

640 - Forest Fire Protection

Fire drills were held at Headquarters, Volcano House and CCC camp.
650 - Building Fire Protection

One safety meeting was held at the CCC Camp.

660 - Insects and tree diseases

Inspections were made of all forested areas in the park by Mr. Nagerlund and the undersigned. Findings have been reported elsewhere.

690 - Public Health

The roof gutters on the buildings in the Headquarters area were cleaned during the month.

800 - Miscellaneous

Herbert Quick arrived to take the position as General Foreman. Fifty-five wild goats and three pigs were killed during the month.

A good suggestion is noted in Ranger Jess's report pertaining to leveling in front of Lava Tube Shrine. It is recommended that a work-order be issued for this work.

It is suggested that the park laborers be allowed to hunt pigs one evening per week as extensive damage is evident on the road shoulders between Hilo entrance and Moknapahi Crater.

Joseph H. Christ
Chief Ranger.
Memorandum to Superintendent E. G. Wingate
through office of the Chief Ranger.

The following narrative report for the Haleakala Section for the month of October is respectfully submitted:

000 General

010. Prospects for hot baths in the CCC Camp are improving rapidly. Good weather during October favored the installation of the water system. It is over 90% complete.

020. The weather was mild and favorable throughout most of the month. Eleven days were clear, and only three were cloudy at the summit. A total of 1.56 inches of rain was recorded at the Pakaoao Observatory, most of it during a mild Kona on October 23-24. There was a light frost the morning of October 29. At the Ranger Station, a total of 1.62 inches of rain was measured. Pallu, in the crater had 6.80 inches, and the head of the Halemau trail had 5.5 inches. A minimum temperature of 40 degrees was registered at the Ranger Station on the 20 and 21st of the month.

100 Administrative

120. Park inspections by Superintendent E. G. Wingate spent two days, October 30 and 31, in the Haleakala Section inspecting the Ranger Station water system, and studying the proposed water system for Pakaoao Observatory.

150. CCC camp received a 1939 Chevrolet enclosed delivery truck.

170. Data on detailed contours at the site of the proposed entrance gateway and the site of the proposed operators building at Pakaoao Observatory were sent to CCC Architect Kolenhoff.

200 Maintenance, Improvements and New Construction.

230 New Construction.

Painting in the Ranger Quarters is proceeding rather slowly due to lack of such experience among the personnel. The concrete front steps have been completed. The mile off one inch pipe, the 10,000 gallon fire storage tank, and the 10,000 domestic storage tank in the Ranger Station water system have been installed. Another week of work should put the water system in service.

500 Use of Park Facilities by the Public.

510. The Maui County Fair, and the National Guard Encampment raised traffic to the Haleakala Section to 501 cars for October.

600 Protection

640. Twelve goats, six male and six female, were destroyed.

H. A. Powers
Ranger in Charge.
Memorandum to Superintendent E. G. Wingate through office of the Chief Ranger.

Enclosed are the weather reports, travel report, and narrative report for the month of October, 1939, for the Haleakala Section.

H. A. Powers
Ranger in Charge
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

November 1, 1939

MEMORANDUM FOR THE SUPERINTENDENT. (THROUGH THE CHIEF RANGER)

The rangers' report for October, 1939, follows:

Oct. 1. Switchboard. Flag, night patrol and 24-hour duty for 1 week.
2. Office work on reports. Museum Duty. Evening, bird talk and Krakatoa to 83 at EMD.
5. To Puu Ualua to pick up Jaggar party.
7. Repaired telephone line on Byron Ledge. Searched for stolen car.
8. Perused Supt's. Reports. PM, patrol.
14. Inter Island Tour, 9 persons in 2 cars. PM, off duty.
15. Manua Loa Tour, 8 persons in 2 cars. Rain, 0.04. PM, off.
16. Supervising Bird Park work. PM sign painting. Evening, Bird talk and Krakatoa to 97 persons at EMD.
17, 18, 19, 20. Painting and working on signs.
21, 22, 23, 24. Moving to new house, Off Duty.
27. Off Duty.
28. Switchboard.
29. " Flag, 24hr. Duty, Night Patrol for 1 week.
31. Sign painting.

24 mongoose and 9 rats were destroyed from Bird Park. This makes a total of 36 mongoose and 14 rats killed in this area. As an experiment, 6 mino birds were trapped in 1 afternoon in the back yard of my former house, using only one trap. These birds were taken to Makaopuhi and released. One pig was killed with the patrol car near Aalea, 10/6/39.

Gunder E. Olson, Park Ranger.
MEMORANDUM FOR THE SUPERINTENDENT THRU THE CHIEF RANGER.

Subject: Narrative report for October.

The highlight of the month was my trip to Puu Ulaula and vicinity for the period of October 2 to 5, where I assisted Dr. Jagger in a study of the various lava flows in that area.

Six days were spent on museum duty during the month. Considerable time was spent on telephone line maintenance and instrument repair. A new instrument was installed in Ranger Olson's new quarters. Another instrument was rebuilt and installed in the new telephone shelter at the Ena Entrance. A cutout switch was installed at Puu Ulaula to remove the line load from that point to the Summit. I also repaired a break in the Supt's private line to his residence. Routine flag, switchboard, and patrol assignments were carried out.

Public contact work during the month consisted of 1 Mauna Loa Tour, 2 regular Park Tours, 3 tours with special groups, 2 Kipuka Puauulu hikes, and 3 hikes to the Footprints and Mauna Iki for a total attendance of 134. I also assisted in the handling of the men from the Japanese training ships. Included in the above is the special tour given Mr. and Mrs. Fox and guest. Mr. Fox is an executive of the S. H. Press Co.

On Saturday, October 21, I picked up Macario Costello, a Filipino, at the Keauhou Ranch, and brought him before the Supt. for hearing on a charge of violating the Park Speed Limit. At the request of the Supt. I conducted a driving test for this man. My findings have been listed in the Traffic Offense file.

Comments: I believe that we should take steps to improve the area directly in front of the Lava Tube Shrine. At present, people have to step on a slippery, sloping bank in order to reach the proper position to read the printed matter. This bank could be graded off and a short walk constructed which would provide a comfortable place to stand while reading this material.

Signed: [Signature]
Park Ranger.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII
Nov. 1, 1939

MEMORANDUM FOR THE SUPERINTENDENT
THROUGH CHIEF RANGER CHRIST

SUBJECT: Ranger Report for the Month of October (Schulz)

Duties:
Regular turn was taken at such routine duties as 24-hour duty, flag, and night patrol, and switchboard.

Thirteen half days were spent on duty at the Hawaiian Volcano Observatory.

A total of three days was spent on road and campground signs.

Oct. 1 and 2 horses were taken to Puu Uula and back for Dr. Jaggar with Ranger Jess.

One and a half days were spent drafting (tracing).

One patrol trip was made to Hilina Pali by car and a patrol and orientation trip by foot was made in company with Chief Ranger Christ and Asst. Park Naturalist Fagerlund to Halape and back (to Kipuka Nene).

In contact work: Two and a half days were spent on duty in Uwekahuna Museum during which 22 persons specifically contacted.

2 lectures were given to 32 visitors
3 caravans were conducted for 30 visitors
1 hike was conducted for 11 visitors.

Two news releases were issued to the press

Comments:
1. It is suggested that a copy of the monthly "daily ranger" schedule be posted at the first of each month in the front office where it will be of great assistance to the man on switchboard duty. At present he is often uninformed as to the whereabouts of many of the men.

2. Liberty is taken again to call attention to the high fill curve with no shoulders where the Crater Rim Road drops into Ei-lesa Crater. It is felt that without a caution and "no shoulder" sign the curve is dangerous. A painted center line might be desirable, but since the pavement is quite wide is not essential.
Guiding affic lines in conjunction with the newly constructed island at Park Headquarters painted on the pavement would greatly increase the benefits of the island.

The three new stove incinerators are a great improvement over the old garbage cans. Similar ones at each Summer Camp and Namakan Campgrounds would also be desirable. Two small stone fire places like the one now at the Kipuka Pualehu Campground would also be desirable at all three of these camp (or preferably, picnic) grounds. It is further suggested that three or four permanent, heavy, rustic picnic tables and benches be constructed of Eka or Ohia at each of the picnic grounds. These appearance, utility, and appeal would thereby be much increased. One of the present frame type tables could be left in each of the rain shelters.

The placing of public registers at such places as the entrance of Kipuka Puaulu, Halemaumau, Lava Tube, Footprints, etc., might serve the twofold purpose of giving a more accurate count of the use made of specific trails, etc. by the public, and also to reduce the amount of marking on trail signs by those anxious to leave their names in public places. Such registers are used with success by several of the far western National Parks.

At Uwekahuna 2 glass panes broken in the projection room window are in need of replacement.

Lawn in the dumb-bell shaped plot at Uwekahuna Museum parking area is in need of cutting.

The newly laid out parking space at Uwekahuna is very satisfactory and makes a very neat appearance.

Uwekahuna Lecture Hall is too small to accommodate such large crowds as that from the H.I.M. "Awate" recently. This is unfortunate for especially when weather is bad and when the visitors cannot understand English explanations the eruption motion pictures would fill a great need. Under such circumstances it would be possible perhaps to show the film at KNO theatre—one or two showings reaching most if not all of the crowd. For the park naturalist division it would mean a further numerical increase in contacts.

It is hoped that the following comment is not construed to be a complaint because of slight personal inconvenience involved in the newly instituted night patrol. However it is felt personally that the additional time and expense do not justify night patrol. In the week spent on such duty no concrete good was done nor did the opportunity present itself to do so by the undersigned. Each of the seven nights involved an average drive of 40 miles, making a total of 280 miles over and above all regular daytime driving, which continues as before. Further it means that the man who is supposed to be available at all times is inaccessible for two periods of up to two hours.

Days off:
The total of 7 days off were taken as follows:
Full days: Oct, 3, 4, 5, 13, 23
Half days: Oct, 9, 16, 20, 28
Oct. 23 and 28 fell in the 24-hour and night patrol week.
Wild Life and Natural Phenomena:

Numerous birds were observed, but none of unusual interest.

Mauna Loa rain gauge readings were as follows:
Oct. 1  .38
7     .11
8     .31
11    .10
17    .00
25    .05
27    .00
29    .02

Paul Ernest Schulz
Park Ranger
Memorandum to the Superintendent:
   Through the Chief Ranger.

Narrative report for the month of October, 1939.

Most of the month was spent in observatory routine work, in making long needed repairs and improvements on seismographs, mostly in the driving mechanism to prevent the drums from "running", and replacing and adjusting driver cloaks that were worn and dirty, and in checking and improving the timing device for needle-lifting. This last required some checking of the telephone system and in assisting in reducing shorts and resistances of same.

Much time was spent in bringing the observatory inventory toward completion, being about 90 per cent through, about all that remains is to finish reports to your office of equipment to be placed on books and equipment to be picked up and dropped to clear the observatory files.

The usual switchboard, flag, museum, and 24 hour patrol duties were performed and one Mauna Loa tour, one Inter-island tour were conducted. Also assisted in handling the Nipponese training ship tours.

Suggest that the supered turn at the Mauna Loa gate be leveled as many cars are stopped on either side of the gate while it is being unlocked, and as all cars must be stopped there is no need for a super-elevation at that point.

Respectfully submitted,

[Signature]
John E. Minter,
Park Ranger.
Edward G. Wingate, Superintendent
Hawaii National Park

SUBJECT: Report of the Hawaiian Volcano Observatory October 1939

Dear Mr. Wingate:

The month was without special volcanic events. An expedition was made to Puu Ulaula, a statement of volcanologist's plans for 1940-41 was prepared, the University of Hawaii building was the subject of equipment for these plans with a carpenter employed, and progress was made with new instrument improvements and manuscripts and illustrations.

Volcanic Activity of the Month

The following were the local data for the month:

<table>
<thead>
<tr>
<th>Week ending</th>
<th>Seismicity</th>
<th>Slides</th>
<th>Crack openings</th>
<th>Local tremors and quakes</th>
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<td>October 8</td>
<td>6.25</td>
<td>0</td>
<td>3.0 mm.</td>
<td>22</td>
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<tr>
<td>15</td>
<td>11.25</td>
<td>1</td>
<td>2.0 mm.</td>
<td>83</td>
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<td>2.5 mm.</td>
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<td>29</td>
<td>5.25</td>
<td>0</td>
<td>-6.5 mm.</td>
<td>19</td>
</tr>
</tbody>
</table>

Of two shocks recorded on Oct. 11, one was felt in summit crater of Mauna Loa and the other at Kilauea.

Work of the Volcanologist

Dr. Jaggar was with the Puu Ulaula expedition Oct. 2-5. He employed Okuda, carpenter, after October 9 to make shelves and cases in University of Hawaii building; much progress in this was accomplished.

A special report was prepared and mailed Oct. 19 (copy was sent Superintendent) on the research manuscripts of the volcanologist with which he will be engaged 1939-40-41, for Messrs. Atherton and Crawford, the presidents of Research Association and University respectively: this includes plans for the work room No. 8 Hawaii Hall, and its duplicate Observatory files for Honolulu work, and fire safeguard. A system of copies and miniature camera films is being worked out that will preserve as positives all the Observatory negatives and sheet
records, and at the same time make them available for study by the Volcanologist in his Honolulu laboratory.

Conference with H. T. Stearns October 10 showed that he and an assistant had visited the bombing locality in two days from Humuula recently, and he gave me copies of pictures he took. He followed our route of September, and is completely convinced of the good hits on lava channel made by the bombers of December 27, 1935.

Work on "Crater" manuscript continued and this material will be taken to Honolulu in November for extending the illustrations to photographic material specially treated by experts there, and for library work on the references. The maps have been drawn to 1934 and a selection of negatives and of panoramic prints has been made. Excellent color photographs were returned from Rochester for the exposures made at Humuula by Mr. Jaggar.

Specimens in large number have been collected at the Observatory, and to make them available for special chemical studies, more specimen cases are being built in University Building, and some specimens are being taken to Honolulu for spectroscopic tests. On October 30 a conference with Dr. Hance in charge of the Chemical Laboratories of Hawaiian Sugar Planters' Association led to an offer by him to make some such tests with the large spectrograph, having in view identification of dates of flows.

Mr. Jaggar went to Honolulu October 29 to work at the University through November, taking with him Volcano Letter manuscript.

Puu Uulaula Expedition

October 2 to 5 Messrs. Jaggar, Schulz and Mrs. Jaggar went to Rest House and studied the flow sources. Mr. Schulz returned with horses and Mr. Olson brought the horses October 5. October 2 a reconnaissance was made of the cones below Red Hill.

October 3 the source cones of 1880-81, 1855 and 1899 were studied and photographed in monochrome and color, and specimens were collected. A horse route to Humuula down 1899 lava was found.

October 4 the 1880 pahoehoe was followed down to Black Cone and the sources of that flow and 1855 were studied, specimens collected, and photographs made.

October 5 the Kapapala Branch of 1880 was studied, and an older sharkskin lava flow north of it. It is proposed to test the spectrograph lines of rare elements in all the flows of different ages.

The weather was good and the expedition cleared up numerous points about dated flows on the Hilo side.

Work of the Assistant Geologist

Mr. H. H. Waescohe reports that he has carried on the usual routines required in maintaining weather, seismic and tilt records. Crater angles were measured twice and the crack measurements around Halemaumau and along Chain-of-Craters were determined each Friday morning. Routine field trips to the Pit were made on four
days including as many visits to the Mauna Loa seismograph.

New developments of the month were the rebuilding and adjusting of 2 slow swinging balance-wheel, seismograph driving, clocks so that their balance-wheels were of the rapidly moving type thus producing a steady moving drum. The two clocks were installed on the loe magnification seismograph at the Observatory and the Uwekahuna seismograph respectively.

Calculation of the constants on the Mauna Loa seismograph were completed; the Howard clock formerly used in the Mauna Loa station was brought to the Observatory for adjustment. This clock is to be sent to the Hilo station and a similar one to Kona.

The tilt-meter designed by Dr. Eller and recently stored in the basement of the observatory has been moved to the small shop where it is to be redesigned and again put into operation.

The quarterly seismological report used in the Volcano Letter was completed. Two tubes of gas were collected for Dr. Ballard of the University of Hawaii October 13. Attended National Park Safety Committee Meeting October 24.

The Observatory had six visitors during the month.

Work of the Assistants

S. Sato, A. Okuda and H. Yasumaka worked at their usual duties.

Ranger Minter built a new design of drum coupling for Mauna Loa and Vertical seismographs, and put finishing touches on new earthquake annunciator.

Enrollee Khim took Nakano's place on the earthquake manuscripts after October 24.

T. A. Jagger
Principal Scientist
REPORT OF CAMP DIRECTOR FRANK C. HUSTON CCC HNP TO PARK SUPERINTENDENT EDWARD G. WINGATE, HAWAII NATIONAL PARK, FOR THE MONTH OF OCTOBER, 1939

During the month we enrolled 40 new enrollees and discharged 9, 8 Honorable and 1 Dishonorable. Two Honorable for securing outside employment, five for expiration of enlistment, one needed at home and a dishonorable for continually going AWOL.

There was a total of 104 mandays lost during the month due to operations and sickness, 12 mandays lost due to minor operations, 4 mandays lost due to minor accidents, and the remainder due to colds and miscellaneous causes.

The Recreational Officer's report shows much activity during the month with football again leading. The 140 lb. team is in third place and will play in the second round. The 120 lb. team is tied for third place and will also play in the second round. In basketball our team won first round in the HRC Businessmen's League winning all games played.

The boxers are training for the smoker to be held in Hilo Nov. 4th.

Two Safety meetings were held during the month, attended by all enrollees and personnel of the camp.

The Project Superintendents report shows a daily average of 149 enrollees released to him during the month of 22 working days, making a total of 3280 mandays worked on projects.

Jobs

<table>
<thead>
<tr>
<th>U-3 Underground Telephone System</th>
<th>140 mandays used.</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-4 Employees Cottages</td>
<td>306 mandays used.</td>
</tr>
<tr>
<td>R-4 Hilina Pali Truck Trail</td>
<td>Work started October 19th on this project.</td>
</tr>
<tr>
<td>B-19 Museum Structure</td>
<td>Foreman Markiewitch and his crew built a water shed at the Maunasiki Footprint Area, 35 mandays used.</td>
</tr>
<tr>
<td>249 F Field planting</td>
<td>165 mandays used in planting at Kipuka Puaulu</td>
</tr>
<tr>
<td>250 P Removal of Exotics</td>
<td>844 mandays used in removing at Bird Park and around the Park Area.</td>
</tr>
<tr>
<td>308 CCC Camp Construction and Construction of Employees Cottages</td>
<td>The fifth cottage was completed during the month.</td>
</tr>
</tbody>
</table>
319 Landscaping, Headquarters Area
540 mandays used on this project constructing curb at Park Headquarters

359 F Landscaping Employees yards
194 mandays used.

320 Fire Hazard Reduction
This project 100% completed.

Work continued on some nine other projects in the Park.

Dr. Phillips left on a visit to the mainland this month and Dr. Chang is taking his place. They made the regular weekly inspections and his report shows the camp in good condition and the health of the boys good.

Haleakala Side Camp

The report of the foreman of this camp shows 342 mandays worked on projects, with a loss of 54 mandays due to bad weather.

Dr. Jones inspected the camp on the 9th. Superintendent Wingate visited the camp October 30th and 31st.

One Safety Meeting was held.

The ranger cottage is nearing completion.

Jobs

U-2 Water System
The tanks and pipe line are completed

H-12 Horse Trail
2 miles completed on this project.

Respectfully submitted,

[Signature]

Frank G. Huston,
Camp Director,
CCC RMF
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

Haleakala Section, Hawaii National Park for the month of October, 1933

<table>
<thead>
<tr>
<th></th>
<th>This Month</th>
<th>This Travel Year To Date</th>
<th>This Month</th>
<th>Last Travel Year To Date</th>
<th>Increase for Travel Year</th>
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<tbody>
<tr>
<td>PRIVATE TRANSPORTATION:</td>
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<tr>
<td>Cars first entry</td>
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<tr>
<td>Cars reentry</td>
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<tr>
<td>Motorcycles,</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Total motor vehicles</td>
<td>* 501</td>
<td>501</td>
<td>* 974</td>
<td>974</td>
<td>473</td>
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<tr>
<td>Persons entering via motor vehicles</td>
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<tr>
<td>Total persons entering via private transportation</td>
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<td>2365</td>
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<tr>
<td>OTHER TRANSPORTATION:</td>
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<tr>
<td>Persons entering via stages</td>
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<td>Persons entering via trains</td>
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<tr>
<td>Persons entering otherwise</td>
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<tr>
<td>Total other transportation</td>
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<tr>
<td>GRAND TOTAL ALL VISITORS</td>
<td>2505</td>
<td>2505</td>
<td>4870</td>
<td>4870</td>
<td>2365</td>
</tr>
</tbody>
</table>

Automobiles in public camps during month, . . . .
Campers in public camps during month, . . . . . 0 no record
**TRAVEL REPORT**

**Kilauea Section, Hawaii**

<table>
<thead>
<tr>
<th>National Park for the month of October, 1933</th>
</tr>
</thead>
<tbody>
<tr>
<td>This Month</td>
</tr>
<tr>
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<tr>
<td></td>
</tr>
</tbody>
</table>

**PRIVATE TRANSPORTATION:**

- Cars first entry . . . .
- Cars reentry . . .
- Motorcycles . .
- Total motor vehicles
- Persons entering via motor vehicles . .
- Persons entering via other private transportation
- Total persons entering via private transportation

**OTHER TRANSPORTATION:**

- Persons entering via stages
- Persons entering via trains
- Persons entering otherwise
- Total other transportation
- GRAND TOTAL ALL VISITORS

**Automobiles in public camps during month . . .
Campers in public camps during month . . .**
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FILE NO.

MONTHLY REPORT
SEPTEMBER 1939

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.

ARNO B. CAMMERER,
Director.
MEMORANDUM FOR THE DIRECTOR:

There follows the report of activities in Hawaii National Park during September.

GENERAL

The most outstanding event, from the standpoint of public interest, was the dual celebration on September 16 and 17 of the 75th anniversary of the building of the first Volcano House and the 75th birthday of its present manager George Lycurguas. The original structure was of a native "grass shack" type, built of pili grass in 1864, and with the increasing number of visitors it was found necessary to build a more substantial hotel, which was completed about two years later. This is the building which stands just in back of the present Volcano House, constructed by the Inter-Island Steam Navigation Company in 1921.

Mr. Lycurgunas has been associated at different times with the Volcano House for 25 years, since 1904; thus this dual celebration was cause for receipt of many greetings including President Franklin D. Roosevelt, Secretary of the Interior Harold L. Ickes, Territorial Governor Joseph Poindexter, and our own Director Arno B. Cammerer; and many other notables from the mainland and territory. At a luncheon on the 16th for his kamaaina friends, Mr. Lycurguns was his own toastmaster; and toasts were given by several of the guests, among whom were United States Senators King of Utah and Russell of Georgia. The concluding talk was made by the superintendent, who read Director Cammerer's message of congratulation, which was received with great applause and genuine pleasure by the staffs. He then presented Mr. Lycurgunas with a golf club on behalf of the park personnel.

On Sunday morning, the 17th, with simple but impressive ceremony the old Volcano House was dedicated as an historical museum which Mr. Lycurgunas in his remarks preferred to the National Park Service. The ceremonies included hymns by the Hawaiian choir of the Haili Church, Hilo; a prayer in Hawaiian; and remarks by Mr. Frank Atherton of Honolulu and the superintendent. Several very valuable paintings, photographs and other articles have been donated or loaned perpetually to the Volcano House museum.
Another event of especial importance was the confirmation in the field of Dr. Jaggar's theory that the bombing of the 1935 lava flow on Mauna Loa caused the flow to stop. The evidence secured on this field trip appeared conclusive. (Reported in detail under 433 - Geology).

100 - General Weather Conditions

Precipitation at Kilauea headquarters was 2.95 inches, at Haleakula ranger station 2.36 inches and Haleakula observation station 1.93 inches. Maximum and minimum temperatures at Kilauea were 78 and 61.6 degrees, and Haleakula ranger station 79 and 42 degrees; with maximum wind velocity at Kilauea of 21 mph on the 12th.

110 - Superintendent's Special Activities

The superintendent returned from Honolulu on the second and was engaged principally on matters pertaining to the 75th anniversary celebration of the Volcano House until the 17th. Trips were made to Kalapana on the 19th and through the Puna district on the 23rd. The Chain-of-Craters area was inspected on the 22nd with attention given to dying ohia lehua in the vicinity of Panahoi Crater. Work on eradication of exotics was carefully inspected at Kipuka Puaulu on the 24th and on the 27th with Assistant to the Superintendent Moonaw, Park Naturalist Fagerland, and Ranger Olson the dying ohia lehua area was studied. Other inspections were routine covering CCC work in the headquarters area.

120 - Park Inspections

Dr. Stanley S. Ballard of the Physics Department, University of Hawaii, and also Research Associate in Geophysics with the Service, accompanied by Kenneth McM, graduate assistant in the Physics Department, arrived on the second and departed on the 17th. While here they were engaged in collecting gas samples from various sources at Kilauea and the summit crater on Mauna Loa and connected research work.

160 - Plans, Maps and Surveys

Markers have been erected along the Kalma boundary. Work is almost complete on a survey by the CCC to gauge the depths of the Chain-of-Craters.

160 - General Publicity

At the request of the editor of the Paradise of the Pacific, a magazine published in the territory, the superintendent submitted an article for its Christmas number. Assistant to the Superintendent Moonaw, also wrote an article for this same number. The park received widespread publicity on the occasion of the celebration of the 75th
anniversary of the Volcano House; there being a special edition of
the Hilo Tribune Herald on that occasion; also a nation-wide broad-
cast over the Mutual radio hookup in connection with the Hawaii Calls
program, originating at the Volcano House, on the 16th.

200 - Maintenance, New Construction and Improvements

210 - Maintenance

The district ranger at Haleakala reported that a large boulder
which fell from the cliff caused slight damage to the foundation and
lower wall of the Kepalaoa shelter cabin.

220 - New Construction

The first of the three laborers' cottages under construction by
the CCC (Project 2-4) was completed during the month; as was also the
fourth employee's quarters (Job 306). The fifth of these quarters is
70% complete and should be finished the latter part of October. At
Haleakala the sixth employee's quarters, being constructed under this
same Job number by the CCC, was about 95% complete. Work is progress-
ing on the Haleakala water system and the project was 60% complete at
the end of the month; with the three 10,000 gallon tanks and 3-inch
galvanized connection pipe already installed.

230 - Special Improvement Activities

250 - Seven boys were enrolled and 21 discharged - all honorable.
Four secured outside employment, 3 returned to school and the balance
left at the end of their enrollment. One hundred nineteen mandays were
lost due to operations and sickness, 32 mandays because of minor opera-
tions, 23 on account of minor accidents and the balance for colds and
other minor illnesses. Two safety meetings were held during the month.
The project superintendent reported a daily average of 105 enrollees
released to him during the month of 20 working days. At Haleakala the
foreman in charge of the sub camp, reported a total of 372 mandays
worked on projects there, with a loss of 23 mandays because of illness.
One safety meeting was held at that camp.

240 - Improvements of Approaches to Park

The county road crew's work on the shoulders of the Mamalahoa high-
way below Mountain View seems to be of doubtful value to the road and
public safety. The grass and sod was removed from the shoulders giving
them a decided outward slope, resulting in the road being, if anything,
more dangerous than before.
300 - Activities of Other Agencies in the Park

320 - Cooperating governmental agencies

A petition, received from the Maui Lions Club, requesting the establishment of a post office at the summit of Haleakala was forwarded, with favorable recommendation, and a report on the proposal was prepared for the local post office inspector.

330 - Cooperating non-governmental agencies

It was necessary to write radio station KHUK and the Hilo telephone office which holds an annual permit for a rebroadcasting station located in the Volcano House, protesting against the interference it was causing over local telephone lines. Both the radio station and telephone company promised to do what they could toward eliminating this nuisance.

350 - Donations and Accessions

The letter received from Mr. Iyengr, donating the old Volcano House to the Service as an historical museum was forwarded with the recommendation that his offer be accepted by the Department and the Service.

400 - Interpretation

410 - Lecture and Guide Service

Following Director Pachner’s order the use of CCC enrollees in public contact work in the museums and other places has been discontinued.

433 - Geology: The first third of the month was taken up with the trip to Hauuma, at the locality of the bombing of the 1935 lava flow from Muna Lee. Investigations proved beyond all doubt that the bombing definitely stopped this flow, which is considered of tremendous scientific importance. Dr. Jaggar was accompanied on this trip by Assistant Geologist Wausch, Associate Territorial Forester L.W. Bryan, Park Ranger Jess and Mrs. Jaggar. The expedition found astonishing accuracy of hits by the bombers, and every evidence that the bomb explosions cooled and solidified the tunnel lava by caving in the tunnel. The flow of 1880 toward Muna Lee was identified as bounding the 1935 flow on the east; the 1843 flow bounded it on the west.

Dr. Jaggar gave part of the month to work on the book on “Craters,” inspected a new condenser for gases at the sulphur bank, built by Dr. Ballard; started in motion the transfer of the Hilo and Kona seismograph operators, at present paid by Research Association funds, to the Service.
Dr. Ballard has improved the apparatus for the collection of gas at the Sulphur Bank, perfecting the drying of the gases and permitting a larger volume to be collected each month. One of the questions Dr. Jaggar discussed with Dr. Ballard while he was here was the possibility of laboratory melting of Hawaiian lava at the University and producing as and pahoehoe of different types. Dr. Ballard thought well of the proposal to powder the lava of 1880 from Kapapala, Humuula and Hilo, fuse each in the electric arc and test with the spectograph for rare elements, and see if the 1880 lava has characteristic lines that might be distinctive from that of 1935. If by these tests it were discovered that the rare elements, for which the spectograph is excessively sensitive, are changing in Hawaiian magmas through the century, a new method would be added to volcanology for determining the age of lava flows.

500 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

Total travel to Kilauea section during the travel year, ending September 30 was 199,901 persons as compared with 173,265 for last year. At Haleakula total travel was 26,940 as compared with 22,605 for the previous year. Travel for the month of September at Kilauea and Haleakula amounted to 19,158 and 900 persons respectively; compared with 14,549 and 3,590 for September 1938.

530 - Visitors

Among the visitors at the Volcano House during the 75th anniversary, September 16 and 17 were: United States Senator William H. King and Mrs. King of Utah; US Senator Richard B. Russell of Georgia; Territorial Delegate to Congress Samuel Wilder King; D. Howard Hitchcock, well-known Island painter, several of whose paintings are in the old Volcano House; (he was here the entire month); George Armitage, Executive Secretary of the Hawaii Tourism Bureau, accompanied by Mrs. Armitage and party; Mr. and Mrs. E.J. Walsh of Wailuku, Maui, Mr. Walsh is the manager of the Grand Hotel in that town and park operator in the Haleakula section; Mr. Frank Atherton, well-known Island capitalist; Mr. Stanley, President and General Manager of the Inter-Island Steam Navigation Company; and Mr. Acheson E. Kirk, President of the Hawaii Rapid Transit Company, also president of the Tourist Bureau.

600 - Protection

610 - Ranger Service

Seasonal rangers Dr. Fred Ballard and James Cunningham left on the 9th and 30th respectively. The transfer of Ranger John E. Winter to Boulder Dam was initiated; and Civil Service register received from
which selection will be made for the vacancy at Haleakala and that at Kilauea, occasioned by Mr. Minter's transfer.

630 - Wildlife Protection

Six cage traps were received from the Western Museum Laboratories and will be used in exterminating mongooses and rats which menace bird-life in the park.

660 - Insects and Tree Diseases

Study of the fern weevil continued and control work was initiated with the assistance of the CCC. Observations were made in an effort to determine the cause of rapid dying of ohia lehua trees in the vicinity of Pauahi Crater. Evidence points to a subsurface trouble.

680 - Accidents

One safety meeting was held during the month.

900 - Miscellaneous

The news of the death, on the 28th, of Territorial Senator Harry Holt from Maui, was received with deep regret, as Mr. Holt was a firm friend of the Service on that island, and has always been of great assistance in helping to solve our problems.

Ranger Arthur L. Jess reached the semi-finals in the Island cribbage tournament, losing the match by only 10 points. At least he can be proud of the fact that his opponent was the Island champion.

Selection was made from a register furnished by the Honolulu office of the Civil Service Commission for filling the vacancy in our clerk-telephone operator position, which was recently changed from a seasonal to permanent status.
Group at dedication of old Volcano House as an historical museum, September 17, 1939: Left to right - George Lycurgas, present manager; Mr. Allen Wall; Mrs. T.A. Jaeger, Mrs. D. Howard Hitchcock well-known island painter (one of his early paintings of the volcano appears on the chimney above the fireplace), O.T. Shipman of Hilo, Frank Ahebonen well-known Honolulu capitalist, and the donor of several old photographs; Mrs. O.T. Shipman, Dr. T.A. Jaeger and the superintendent.
The superintendent with some of the distinguished guests at the 75th joint anniversary of the building of the first Volcano House and birthday of George Lycuraus, present manager. Left to right: Theupt., Hon. Roy Vitousek, Speaker of the Territorial House of Representatives; US Senators William H. King and Richard B. Russell; Mrs. William King; and Delegate to Congress from Hawaii, Samuel Wilder King.
Large boulder that rolled down side of Helen wall crater, creasing into side of Vepalena cabin, and resulting in slight damage to the foundation and lower wall.

Close-up of damage done by boulder to Vepalena cabin.
Showing method of collecting gas samples for analysis from Hokumoeo crater, summit of Mauna Loa.
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

(Exuma Section) Hawaii National Park for the month of September, 1939

<table>
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<tr>
<th></th>
<th>This Month</th>
<th>This Travel Month To Date</th>
<th>This Year</th>
<th>Last Year</th>
<th>To Date</th>
<th>Increase for Travel Year Number</th>
<th>Percent</th>
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<tr>
<td>Cars reentry,</td>
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<table>
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<th>Last Year</th>
<th>Increase Number</th>
<th>Percent</th>
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<tr>
<td>Campers in public camps during month,</td>
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UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

Haleakula Section, Hawaii
National Park for the month of September, 1939

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<td>Cars reentry,</td>
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<td>Persons entering via other private transportation,</td>
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<td>Total persons entering via private transportation,</td>
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<td>28940</td>
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<td>Persons entering via trains,</td>
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</table>

Automobiles in public camps during month, . . . . . . . .
Campers in public camps during month, . . . . . . . . . .
Mr. Edward G. Wingate, Superintendent
Hawaii National Park

Subject: Report of the Hawaiian Volcano Observatory September 1939

Dear Mr. Wingate:

The first third of September was taken up with a trip to Humuula for camping at the bombing locality of 1935. This was the subject of a special report which has been sent you. Volcanic and seismic happenings were trivial. The month has been given to the usual routine.

Volcanic Activity of the Month

The following are the local volcanic data of September:

<table>
<thead>
<tr>
<th>Week ending</th>
<th>Seismicity</th>
<th>Slides</th>
<th>Crack Openings</th>
<th>Local tremors &amp; Quakes</th>
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<tr>
<td>September 10</td>
<td>11.25</td>
<td>0</td>
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<tr>
<td>17</td>
<td>9.50</td>
<td>2</td>
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<td>24</td>
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<td>19</td>
</tr>
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<td>October 1</td>
<td>4.25</td>
<td>1</td>
<td>2.0 mm.</td>
<td>15</td>
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A feeble earthquake September 7 was felt at Puna. Other feeble earthquakes were September 13 and 14. Eleven measured earthquakes were at Mauna Loa distances or farther, only three local to Kilauea crater. A distant earthquake 2800 miles NNW was registered September 8. At Chain of Craters, road cracks had closed September 10, and opened a little September 17 and October 1. There has been a very little movement at rim of Devil’s Throat and at the road humps.

Work of the Volcanologist

The camping expedition at source region of Kupaia lava flow found astonishing accuracy of hits by the bombers, and every evidence that the source was a crack and that the bomb explosions cooled and solidified the tunnel lava by saving in the tunnel. Considerable time was given to study of maps and photographs of 1935, later in the month. The flow of November 21-22, 1935 did not go to the Humuula source. The flow of 1935 towards Mauna Kea was identified as
bounding the 1935 flow on the east; the 1843 flow bounded it on the west.

Dr. Jaggar gave part of the month to work on the book on "Craters", inspected a new condenser for gases at the Sulphur Bank, built by Dr. Ballard, started in motion the employment blanks for transfer of the Hilo and Kona seismograph operators to the Park Service and assisted Ranger Minter with his inventory of U.S. property in the Volcano Observatory buildings.

Work of the Assistant Geologist

Mr. H. H. Waesche from September 1 to September 5 was with the expedition on the north flank of Mauna Loa.

He determined the constants on the Mauna Loa seismograph and assisted Dr. Ballard with gas collections at Sulphur Bank.

During the first week of September Wong and Sato ran levels around Halemaumau, and on plotting these Mr. Waesche found that the northwest station on the Halemaumau rim still exhibits lowering relative to the gravel flat at station "Spit".

Mr. Waesche during the month conducted his regular routine of entering daily records of seismograph in record book, doing the night work of the seismographs, bringing records up to date of tilt, earthquakes, crack measurements, weather and time corrections, and doing the Halemaumau observations about twice a week and those on Mauna Loa once a week.

He reports, in consequence of suitable notices and signs that the number of visitors was reduced to about fifteen, and mostly the early part of the month.

Work of the Assistants

S. Sato continued selection of seismograms, some outdoor work, and clerical and library work.

Summer Ranger Dr. Ballard finished his work on September 9 and returned to the University of Texas.

H. Nakano was obliged to discontinue his typing of manuscript of earthquakes on account of an ailment of his eyes.

The ranger staff Messrs. Schulz, Minter, Jess and Olson, Photographer Cunningham and Naturalist Fagerland rendered various services to the Volcano Observatory in assistance to the routine and in photographic work and compilation of data concerning Mauna Loa problems. The camping trip to Humuula was a move of first importance to obtain better understanding of the old lava flows that have threatened Hilo, and some additional expeditions are planned for the future with a view to becoming acquainted with the ground in relation to future dangers of this kind, and also in relation to proposed Mauna Loa addition to the Park.
Dr. Ballard of the University of Hawaii accompanied by Mr. Mau, instructor in chemistry, arrived at the Observatory September 9, returning to Honolulu September 17. Dr. Ballard brought with him the National Park spectrograph which he has been thoroughly testing. The instrument required much improvement with velvet gaskets, as it leaked light. It is now giving very good service, and Dr. Ballard has built a portable box to protect it, which may be carried on a pack animal.

Dr. Ballard went to Mokuaweoweo with Rangers Schulz and Olson on September 13 and collected six tubes of Mauna Loa gases. He also improved the apparatus for collection of gases at Sulphur Bank, so that the drying of the gases is very perfect, and a larger volume can be sent to Honolulu every month.

Mr. Mau collected specimens for chemical analysis and went about Kilauea crater with Dr. Jaggar on September 13, and was given analysis material of the 1935 aa, lava that was collected hot.

Two questions were discussed with Messers Ballard and Mau while they were here:

(1) The possibility of a chemical or spectrographic test on lava that flowed out in any given year that would be distinctive of that eruption, regardless of the lava type;

(2) The possibility of laboratory melting of Hawaiian lava at the University and producing aa and pahoehoe of different types. Dr. Ballard thought well of Jaggar's proposal of an experiment, to powder the lava of 1880 from Kapapala, Humuula, and Hilo, fuse each in the electric arc and test with spectrograph for the rare elements, and see if 1880 lava has characteristic lines that are distinctive from, say, the lava of 1935. If by these tests it was discovered that the rare elements, for which the spectrograph is excessively sensitive, are changing in Hawaiian magma through the century, a new method would be added to volcanology for determining the age of lava flows.

Ranger Minter has completed the rebuilding of the annunciator for earthquakes in the Observatory basement. The new instrument is greatly improved, is constructed entirely of metal, and its adjustments are more positive. On the basis of these improvements the bell-ringing annunciators which have been constructed for amateurs, can now be made practical and distributed.

Ranger Olson has furnished valuable data and photographs concerning the first day of the source region of the Humuula flow of 1935, to which he went with Joe Ignacio about November 25, 1935. It is now perfectly clear that the Humuula source was a separate crack in the mountain, and that no lava flow from the upper source went to that place.

T. A. JAGGAR
Principal Scientist
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

Hailuku, Lani
September 30, 1939

Memorandum to Superintendent E. G. Wingate
through office of Chief Ranger J. H. Christ

Enclosed are the weather reports, the monthly travel report,
and the narrative report for the Haleakala Section for the month of
September 1939.

One battery on the vehicle counter failed some time during the
last two weeks of the month, causing the counter to miss some of the cars.
However, by observation, traffic was unusually light this month for some
unknown reason, so I sent in the actual count, both on the month report
and the annual report.

H. A. Powers
Ranger in Charge
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

Memorandum to Superintendent E. G. Wingate through office of Chief Ranger.

The following narrative report for Haleakala Section for the month of September is respectfully submitted:

000 General

010. A rock of a cubic yard dimension bounded down the cliff and struck the foundation of the cabin at Kapalaoa. Fortunately the damage was slight and can be easily repaired. The wood supply at Holua cabin has been replenished by packing in fire wood, which has been hauled by truck from Kihei.

020. Gl amen t weather prevailed through most of the month. There were two mild Kona storms, one during the first week, and one during the last week of the month. At Pakamoa there were eleven clear days and only four entirely cloudy. Rainfall of 1.93 inches fell during three separate storms. At Halemaumau the rainfall, adjusted for evaporation loss from the can, was measured at 6.3 inches. At the Ranger Station, there were six cloudy days and eight clear days. There were no strong winds. Some rain fell on eleven different days, totalling 2.35 inches. Minimum temperature of 42 was reached on four different nights, and a maximum of 79 was recorded on one day. The coldest day was the 29th, when the maximum for the day was 58 degrees.

100 Administrative

101. Equipment and supplies. Received on Sept. 5, 10 only: 200 Springfield 6 ply 6:00x18 casings and 10 tubes per case.

200 Maintenance, Improvements and New Construction.

230. Carpenter work and painting on the new bath house for the CCC camp was completed. Concrete work on the back porch and stairwell leading to the basement was completed on the Ranger Quarters. Interior wood work is over 95% completed. Installation of three 10,000 gallon redwood tanks, and 3 inch galvanized connecting pipe was completed at the intake of the new water system. Enough water has been intercepted to soak up and cover the bottoms of all three tanks.

500 Use of Park Facilities by the Public.

510. Traffic was exceptionally low, for no obvious reason. Only 180 cars were recorded during the month.

600 Protection

640. Twelve goats, five male and seven female, were destroyed.

H. A. Powers
Ranger in Charge

During the month we enrolled seven new boys and discharged twenty-one, all honorable discharges. Four secured outside employment, three returned to school and fourteen left at the end of their enrollment.

There was a total of 119 man-days lost during the month due to operations and sickness, 32 man-days lost due to minor operations, 23 man-days lost due to 5 minor accidents and the balance due to colds and other miscellaneous causes.

The recreational officer's report shows much activity during the month with football leading. Two football teams have been entered in the H.R.C. league, one 120 and one 140 pound team. Both teams have been training during the month. Basketball is the main attraction for the boys in camp during their spare time. The boys are much interested in a game of baseball dart we purchased for wet evenings in the recreational hall. Three meetings were held during the month.

Two safety meetings were held during the month.

The project superintendent's report shows a daily average of 155 enrollees released to him during the month of 20 working days, making a total of 3092 man-days worked on the projects.

U-2 Water System (Maui):

158 man-days worked.

U-3 Underground Telephone System:

118 man-days worked. 97% complete.

E-4 Employees Cottages:

116 man-days worked, completing one cottage and starting on the second.

250P Removal of Exotics:

917 man-days used in Bird Park and Park area.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAwAII NATIONAL PARK
HAWAII
October 2, 1939.

MEMORANDUM FOR THE SUPERINTENDENT:

Subject: Chief Ranger’s Report for September, 1939.

010-Introduction
The outstanding event of the month was the 75th Anniversary Celebration
of the Volcano House. Many Island notables attended this affair at the
invitation of George Lycurgus who also celebrated his 75th birthday at the
same time.

100-Park Inspections
One Mauna Loa Summit trip was made during the month and one seacoast
patrol for photographs. The Junior Warden also spent the greater part of
the month on seacoast patrol trips.

150-Plans, Maps and Surveys
CCC Engineer Wong completed the Kahue boundary survey during September
and the Junior Warden has erected boundary markers along that line.

Work is almost complete on a survey to gauge the depths of the Chain
of Craters by CCC.

230-Special Improvement Activities
A CCC crew has begun the beautification of the Headquarters building
grounds by constructing curbing and providing a larger parking area for
cars.

The first laborers’ cottage was completed this month and work started
on the second. The fourth employees’ quarters constructed in this section
was completed and occupied early in the month, the fifth and last now
being about 95% complete.

240-Improvement of Approaches to Park
Hawaii County road crews have done some work on the road shoulders of
the Mamalahoa Highway, mauna of Mountain View. This work appears of
doubtful value to the road and public safety. They are removing the grass
and sod from the road shoulders and giving them a decided slope outward,
making the shoulders, if anything, more dangerous than before.

350-Donations and Accessions
The Old Volcano House building and many old photographs and paintings
pertinent to the Volcano were accepted by the Park upon the occasion of the
75th Anniversary of the Volcano House. The building will be used to accomo-
date these old historic relics and will be open to the public as soon as
some repairs and adjustments are made.

410-Lecture and Guide Service
The ranger division continued to conduct tours, hikes and lectures
under the cooperation of the Asst. Naturalist.

430—Geology
Extensive observations and studies were made of the bombing site of the 1935 lava flow by Dr. and Mrs. Jaggar, Mr. Waeche, Asst. Forester Bryan, and Ranger Jess. It was assertedly established by these studies that the bombing of this flow was a successful undertaking and caused the eventual stopping of the lava stream.

500—Use of Park Facilities by the Public
One party camped at Namakanai Paio during the month for a period of about 10 days.

610—Ranger Service
The summer appointments of Rangers Bullard and Cunningham were terminated during the month.

620—Police Protection
Daily patrols of all main-traveled roads and areas of the Kilauea Sect. were made with occasional patrols into the outlying districts. Weekly night patrols were made at the CCC camp.

630—Wildlife Protection
6 wire cage-traps were received from the Western Museum Laboratories and will be used in exterminating mongooses and rats which menace bird-life in the park.

680—Accidents
One safety meeting was held in the Assistant to the Superintendent's office and various memoranda were read and discussed.

900—Miscellaneous
The Bishop Estate lands on each side of the Mamalahoa Highway directly adjacent to the park were surveyed and marked off in acre lots. It is understood that these plots will lease for $25.00 per year on a 20-year-lease basis.

15 new metal road signs were installed during the month.

One meeting of the Board of Survey was held at the CCC camp to dispose of unserviceable property.

Work on the inventory of the Volcano Observatory property is continuing.

One new Chevrolet pickup for the use of the maintenance foreman was received.

It is recommended that lumber salvaged from the old laborers' cabin be used to construct a shelter at Hui O Pele for the junior warden. This employee at present uses the Hu O Pele shelter which should be reserved.
for the use of the public. It is also recommended that an area of 20 acres be fenced west of the Hui O Pele shelter to provide pasturage for park stock kept in this district.

Joseph H. Christ,
Chief Ranger.
Memorandum to the Superintendent:

Through the Chief Ranger.

Narrative report for September 1939.

September 1st - Observatory routine in the morning, inventory check and paper work, in afternoon.

September 2nd - Interisland tour with 5 cars and 22 people. Routine park patrol in afternoon.

September 3rd - Day off.

September 4th - Observatory routine, and repairing clock driving mechanism at Uwekahuna and Pit seismographs.

September 5th - Hilina Pali patrol 8 AM to 11 AM, destroyed 4 goats. Assisted Dr. Ballard 1 1/2 hrs, and worked on gas collecting apparatus for Dr. Ballard.

September 6th - Finished gas collecting apparatus and table to support same at Sulphur Banks - 8 A to 11 N - 1 P to 3:30 PM - Revised jewelry shop motor drives 3:30 PM to 5 PM.

September 7th - Five hours on inventory paper work and 3 hours on parts of annunciator shock recorder for observatory.

September 8th - Sandalwood trail nature walk with 4 people in AM and Mauna Iki hike with 7 people in PM.

September 9th - Switchboard - figured prices on observatory inventory all day.

September 10th - Observatory routine to 9:30 A - Regular tour to 6600' elevation w/4 cars and 16 people, finished observatory field work to noon. Routine patrol in PM.

September 11th - Day off.

September 12th - Observatory routine, patrol in PM - Bird park patrol of 1 1/2 hrs included.

September 13th - Observatory routine in AM - making tripod mounting for spectrograph in PM, for Dr. Ballard.
September 14th - Observatory routine to 9:30 A. CCC Survey board w/ Christ and Fujimoto to 11 AM. Typing survey report to noon. Finished Spectrograph adapter in PM to 5 PM.

September 15th - Observatory routine to 1:30 PM, Mauna Loa drum change included with crack measurements. Reset time of drive mech. on "Pit" seismograph to 2:30 PM. To Hilo at 2:30 PM.

September 16th - Observatory routine 8 AM to 11:30 AM - rest of day off. Road edge at entrance of Namakan Paio reported broken some months ago and was to have been repaired by Rennie but is some what worse and no repairs made as yet.

September 17th - Half day duty at Dedication of Old Volcano House as Museum. Off in PM.

September 18th - Day off.

September 19th - 8 to 9 AM assisting Magrius and Cunningham in getting horses to Bird Park corral. Made staple and hasp for machine shop door at Obs. To Hilo at 2:30 PM to move supplies from Nene to the Pali. Brought Cunningham back to Park and replaced saddle in saddle room - off at 6:30 PM.

September 20th - Left HQ at 8:00 AM w/Cunningham and Schulz and drove to Pali, then via horse to Halape w/Cunningham and Magrius arriving at 2:30 PM. Trail down Pali is excellent but should have been extended across the wash at foot of Pali. This part would be subject to washout but could be easily repaired by the Warden while new construction across is nearly impossible to one man.

September 21st - Assisting Cunningham taking pictures and left for Apua point via Keauhou at 11:00 AM arriving Apua at 1:30 PM exploring area around point rest of afternoon.

September 22nd - Assisted in photo taking to 10:00 AM left for Nene w/ Cunningham and Magrius arriving at 3:00 PM arriving HQ with Ranger Schulz at 5:00 PM. Trail from Nene to Halape in excellent shape.

September 23rd - 24th 25th - Days off.

September 26th - Day off - Checked inventory with Dr. Jagger in AM and inventory paper work rest of day to 4:30 PM.

September 27th - Seismograph routine including Mauna Loa and some repair work on bosch driver mech.

September 28th - Paper work on inventory - making out record cards.

September 29th - Seismograph routine including crack measurement and Mauna Loa drum change - all day to 4:30 PM.

September 30th - Switch board - Inventory record cards all day.

John E. Minter, Park Ranger.
MEMORANDUM FOR THE SUPERINTENDENT THRU THE CHIEF RANGER.

Subject: Narrative report for September.

September 1 to 9 was spent with Dr. Jagger and party in the investigation of the 1935 lava flow. This was a very interesting and profitable trip and was the highlight of my work for the month.

Routine flag, switchboard, and patrol duties were carried out.

Considerable time was spent in erecting the new metal road signs. A wall telephone was installed at the Volcano Observatory and the installation of an instrument at the Weasche quarters was completed. A break in Line 610 near the #2 Fire Cache was repaired. A faulty connection in the Kipuka Puaulu telephone instrument was remedied.

I assisted Chief Ranger Christ in handling traffic and police work at the Volcano House 75th. Anniv. Celebration. No trouble was experienced, and all work was handled in a satisfactory manner.

The name, James S. Fry, Co. I, 35th. Inf. was found written on one of our direction signs near the ENG incinerator. This information was reported to Major Billings with the result that Fry was assigned to work detail for 2 days and then sent back to Oahu.

I believe that our field toilets should be kept in more of a sanitary condition, especially the urinal at Halahaleu. I realize that this is somewhat hard to do in the case of a non-flushing urinal, but think that we could improve them by scrubbing with a cresol solution.

Signed: Arthur L. Jess

Park Ranger
MEMORANDUM FOR THE SUPERINTENDENT:

Through the Chief Ranger.

Subject: Ranger's Report for September, 1939. (Olson)

The highlights of the month's work were as follows:

Considerable time has been spent on supervision of CCC exotic removal in Kipuka Puaulu. This work is now progressing very well and excellent results are beginning to show in areas cleared when the work was begun in June.

Twelve of the new metal regulatory road signs were mounted and installed during the month by the undersigned.

Two Bird Talks in conjunction with the Krakatoa picture were given at HMC Theater to a total of 137 persons.

One meeting each of the Exotic Committee and the Signs Committee was attended.

One 3-day trip was made to the summit of Muna Loa with Dr. Ballard to collect gases. On this trip considerable exploration was done on the crater floor.

The undersigned attended the 75th Anniversary Celebration of the Volcano House and the dedication ceremony of the Volcano House Museum.

Tours conducted during the month were: one HMC tour, 15 persons in 2 cars; one Inter Island tour, 14 persons in 3 cars; one Muna Loa tour, 3 persons in 1 car.

During the period, Sept. 18 to 30, the undersigned acted as Chief Ranger in the absence of Mr. Christ.

To further wildlife conservation in the park, 5 wire cage traps were set in Kipuka Puaulu to eradicate mongoose and rats. 12 mongooses and 5 rats were caught and killed the first day.

Gunder E. Olson, Ranger,
MEMORANDUM FOR THE SUPERINTENDENT
(Through Chief Ranger)

SUBJECT: Park Warden's Daily Report for September, 1939
A. B. Mererios.

Sept. 1--Patrolling from Hilina covering Puu O-Halae through Kau Desert Uwekahuna to Bird Park.

Sept. 2--Bird Park horse corral--shoeing horses--and preparing extra horse shoes for shore line trip.

Sept. 6--Labor Day. Day Off.

Sept. 5--Hauling material and horse feed from Bird Park to Nene--for Apua and Halape camp shelters.

Sept. 6--Patrolling from Bird Park covering Uwekahuna, Kau Desert, Puu O-Halae to Nene.

Sept. 7--Patrolling from Nene covering Inahou section and hauling material and horse feed to Halape.

Sept. 8--Patrolling around Halape shore line.

Sept. 9--Patrolling from Halape covering Kauhini to Hilina.

Sept. 10--Patrolling around Hilina.

Sept. 11--Patrolling from Hilina covering Nene Chain of Craters section pass old Keauhou road to Bird Park.

Sept. 12--Day Off.

Sept. 13--At Bird Park horse corral shoeing park horses and hauled horse feed to Hilina.


Sept. 15--Patrolling and goat hunting around Hilina section. Shot two goats.

Sept. 16--Patrolling and hunting goats at Hilina and Pepeau sections. Shot one goat.

Sept. 17--Patrolling and hunting goats at Hilina and Nene section.

Sept. 18--Patrolling from Nene through Hilina road, Chain of Craters trail pass old Keauhou road to Bird Park.

Sept. 19--Patrolling from Bird Park covering Uwekahuna, Kau Desert to Hilina.
Sept. 20—Patrolling from Hilina covering Kaone and Halape shore line.

Sept. 21—Patrolling from Halape pass Keauhou covering Apua and Kahue shore line.

Sept. 22—Patrolling and hunting goats from Apua pass Keauhou, covering boundry line at Inahou section to Nene.

Sept. 23—Patrolling from Nene through Hilina road covering Chain of Craters trail, pass old Keauhou road to Bird Park.

Sept. 25—Day Off.

Sept. 26—At Bird Park Corral and Hilina.

Sept. 27—Patrolling from Bird Park through Uwekahuna, Kau Desert, to Hilina.

Sept. 28—Patrolling shore line and from Hilina, covering Kaone and Halape. Shot two goats.

Sept. 29—Patrolling shore-line Halape section.

Sept. 30—Patrolling Shore line from Halape covering Kaone to Hilina.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII
October 1, 1939

MEMORANDUM FOR THE SUPERINTENDENT
THROUGH CHIEF RANGER CHRIST

SUBJECT: Ranger Report for the Month of August

Duties:

Regular turn was taken at such routine duties as being custodian of the flag, 24-hour duty, switchboard duty, and night check of the CCC camp.

Thirteen days were spent on duty at the Hawaiian Volcano Observatory.

About two days were spent mounting and emplacing new road signs.

Made numerous regular general park patrols in car, assisting one truck driver in Kau, and one to Hilina Pali. On foot Kau Desert was patrolled as follows on Sept. 1: Kilauea Crater to Puu Kose, to Mauna Ika, to Kamakaia Pali shelter, and on out to the Kualoaho Highway.

In contact work, two lectures were made to 43 people, and 47 guided on hikes, 10 people on two Mauna Loa Tours, and 37 people on "Park Tours".

September 13, 14, and 15 were spent in company with Dr. S. S. Belard of Ranger C. E. Olsen on a volcanic gas collecting trip into the Crater of Mokuaweoweo. Permission granted by Park Photographer Cunningham to make official photographs of the same. Incidentally this was the first trip to the summit of Mauna Loa by the undersigned in his nine months of duty in Hawaii National Park.

Museum accession cards were made for all items in the Volcano House Museum.

Hulls of the Park bird study skin collection were painted with MgCl₂ and cork stoppers were ordered, cut, and fitted into the ends of the transparent bird tubes.

On Sept. 21, 1939 a news release for the N.P.S. Bulletin was issued.
1. It is felt that the established custom of not sounding the Park siren on Monday noons is illogical and that it should be discontinued. Objections that this procedure would cause a general fire alarm on Monday noons could be dispelled by an office order stipulating that on Sunday noons only would the sounding of the fire siren be dispensed with.

2. Since the number of domestic and half-wild cats has been increasing in the headquarters area and since cats have been noted stalking birds, it is suggested that all cats be banned completely from Hawaii National Park. Elepaio and amakiki are among the more vulnerable native birds, especially the former.

3. The new road signs are very satisfactory. The NGS Sequoia Cone enseignia and "USDI" would however make them even more useful, for the Island Public still lacks National Park consciousness and only by constant reminders and protracted education can it be built up. The backs of the signs could be made much more inconspicuous by the application of a coat of the same brown paint used on the sign posts.

4. Exotic plants have come into areas such as Kipuka Pumalu in the past competing with and displacing native species which had already been long and well established. The mere removal of the exotics will probably not be the solution the problem as it will be easier for these same exotics again to come back (this time with even less competition). Observations show many thousands of the geranium seedlings, for instance, to be flourishing in "cleared areas". It is suggested that experimental plots be used in the future to determine the most practicable methods for large scale use.

5. At the date of this writing there is no fire extinguisher either in Waasches' new quarters nor garage. A new one must be installed at Kauhale before this date.

6. It is suggested that rangers not experienced in the handling and shoeing of horses be given opportunities to gain information and experience along these lines, so that these men may be more useful to the Service and will be found ready in case of emergency.

7. The USGS publishes a "Topographic Map" of "Hawaii National Park, Kilauea-Mauna Loa Section, Island of Hawaii", edition of 1936, scale of 1:62,500. None to my knowledge are in stock here and the map is by far more useful than any set of regular quadrangles for the public. It is suggested that a stock of these be put in and that they be sold both at the Museum (Uwekahuna) and at the Park Headquarters office. Perhaps it would be possible that the revised Park Boundaries be shown at least in part.

8. In the Kau Desert patrol paths were found to be well marked and in a satisfactory condition, but the Kawaihaa Hills shelter is very dilapidated. Loose boards, and corrugated roof sheets and poor flooring certainly are not up to NPS standards. Repair is suggested also a regular closed water tank such as has been installed at Pupukea is badly needed. At present only an old open barrel serves as a reservoir; capacity is small and water is dirty.
In view of efforts to effect economies for the National Park Service it is suggested that rangers making overnight Mauna Loa, Kau, Hilina Pali, and similar trips be denied the $1.50 per diem allowance. In most cases the money is "clear", it costing little if any more for a man to eat in the field than at home, and no other expense is normally involved.

Days off:

The following days totaling six and one half were taken off:

All day: September 4, 10, 27, 28
Half day: September 2, 12, 17, 26, 30

Wild-Life and Natural Phenomena:

Mauna Loa rain gague readings at the end of the Truck Trail (6700'):

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On patrol through the Kau Desert a group of about a dozen fair and good footprints (human) were found in presumably 1790 ash on a line between Mauna Iki, and Puu Kose on Sept. 1. Approximate magnetic bearings were N60°E to Puu Kose, and N20°W to the point of descent of the Kaeahuku flow over the fault scarp just outside (west) of the Park Boundary.

The following animals were observed:

Sept. 1 Seven koae in the vicinity of Puu Kose, all on the wing, 11AM
Sept. 2 Four koae in Halemaumau, AM
Sept. 3 Four koae in Kilauea Crater, east end on top of talus, 10AM
Sept. 4 Pueo at 10AM in Kipuka M, large size, slow silent flight
Jo, one at lower fire cache at about 3000 feet on the Mauna Loa Truck Trail at 12 noon. Bird was of a dark phase and winged its way to a koa grove.

Sept. Two iiwi, one Kula palau, and several amakiki and amakiki in chias on boarder of Kaeahuku lava channel at about 5500 feet.

Sept. 15 Saw a small herd of koae at about 6900' on Mauna Loa Trail

Pueo in koa grass lands, rose from the tall dry grass ca. 5500', fairly large bat seen in flight, evidently foraging just above the Kipuka Pumulu coral, about 6 Mi.

Sept. 18 Tow koae seen at KMC still partly in summer plumage it seemed. Several individuals have been seen since in the Kilauea Crater area, but according to my observations the birds are either very scarce or timid.

California Quail and Japanese pheasants (esp. the former) are frequently seen on the Mauna Loa Truck Trail. In Sept. quail are almost all in flocks, but pairs can still occasionally be seen.

Chias on the Chain of Craters Road are still dying in various areas in such a scattered manner that the undersigned is of the opinion that some disease is the most reasonable explanation of the deaths.

Paul Ernest Schulz
Park Ranger
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

MONTHLY REPORT
AUGUST 1939

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.

ARNO B. CAMMERER,
Director.
MEMORANDUM FOR THE DIRECTOR:

There follows the report of activities in this park for the month of August.

OCC - General

Of especial importance, was the visit of Associate Director and Mrs. Demaray, who arrived in Honolulu August 16, in the Kilauea section of the park on August 19 and sailed from Honolulu on August 30. This was the first visit of the Director or Associate Director since Director Stephen Mather was in Hawaii in 1927. Because of the infrequency of these visits it was hoped that the Associate Director could allow more than the two weeks planned, but this was impossible and even this brief time had to be divided between the park and OCC activities under the Territory of Hawaii on three of the other islands. In all, Mr. Demaray was in the park 5½ days including Haleakula. The remainder of the time was spent in travel between and on the islands of Hawaii, Maui, Oahu and Kauai, in conferences, etc., in Honolulu and inspections of Territory of Hawaii OCC camps and projects. Unreasonable demands for time by the Territory of Hawaii OCC prevented any agreement on an itinerary until the day before Mr. Demaray arrived in Honolulu and made it impossible to make arrangements for several people prominent in the territory and of importance to the park to meet Mr. Demaray, invitations to the dedication of the Mather plaque could be sent only to people on the Island of Hawaii and several matters which the staff wished to discuss with Mr. Demaray, as well as some field trips had to be dropped because of lack of time. However, the itinerary as finally agreed upon was followed without any material changes and the foregoing remarks are inserted simply as a suggestion that in the future more time be allowed by visiting officials and an itinerary agreed on in advance.

During their stay at Kilauea the Demarays were taken on the regular Inter-Island tourist tour of the park, through the Chain-of-Craters region including a visit to the old "pulu" factory, to Nīhime Pali, over the Wāna Loa truck trail, to the Footprint Area, to Kalapana and along the shore line drive to Kapoho, inspected the park OCC camp and the Volcano Observatory, through Kipuka Puaulu where the Mather Plaque was dedicated, and over the proposed golf course area. In between field trips, tea was had with Dr. and Mrs. Jaggar, a dinner with Mr. George Lycurgo, followed by showing of colored moving pictures by Ranger Cunningham,
received county, territorial and federal officials, the park staff and local citizens at the superintendent’s, had dinner with the CCC HNP-1 personnel, had luncheon at the Kilauea Military Camp, attended an Hawaiian luau (no puppy to Mrs. Demaray’s “disappointment”) given by Chairman Spencer of the Board of Supervisors, Hawaii, and addressed a luncheon meeting of the Hilo Rotary Club and Chamber of Commerce members. Also the Demarays entertained the ranger and office staff and park operator informally.

On Maui, park activities outside of the crater of Haleakala were inspected and proposed projects discussed on August 26, following which a banquet and dance were given in their honor by the Maui Chamber of Commerce. Mr. Demaray was called upon to address the gathering informally. Besides talks at the various CCC camps visited he was the guest speaker at a luncheon meeting in Honolulu of the Hawaii Unlimited, an association of hotel and transportation people interested in promoting travel.

Despite its briefness, the visit of the Demarays was of real benefit to the park and everyone who met them was delighted with them. Expressions of this delight have been numerous and the following is quoted from August report of the ranger in charge of the Haleakala section, Dr. H.A. Powers: “Those of Maui who, Mr. and Mrs. Demaray fell in love with them, and we hope that they feel the same way toward our island.”

Every opportunity possible was given the various staff members to contact Mr. Demaray in performance of their regular duties and the superintendent, assistant to the superintendent, Mr. Moomaw, and CCC Landscape Foreman Mollenhoff accompanied the party to Maui. The superintendent also visited Kauai with the Demarays and bid them “aloha” in Honolulu when they sailed on August 30.

Other activities during the month were normal but the continuation of large numbers of visitors to the hotel and park necessitated considerable extra duty for the ranger staff. The Kapehana trail was cleared for a distance outside of the park where it had been much overgrown, in the expectation that Mr. Demaray would make this trip, but lack of time prevented. Landscape Foreman Mollenhoff supervised the work of setting up the Mather Plaque. Several new fissures developed in the Chain-of-Craters road and rim road requiring immediate repairs.

A separate report on the dedication of the Mather Plaque is being submitted. About 40 persons attended the simple ceremony which was held on a beautiful afternoon. Mr. George Lycurgus, an old acquaintance of Mr. Mather’s, presented the plaque to the park on behalf of the Appreciation. Acceptance on behalf of the park was made by the superintendent, followed by Mr. Demaray’s address dedicating the plaque.
Total precipitation at Kilauea amounted to 5.03", at the observation station on Haleakula 32" and the Haleakula ranger station 1.13". There was only one completely clear day at Kilauea, the rest either being partly or totally cloudy. Maximum and minimum temperatures at Kilauea were 78 and 51.2 degrees respectively, and the maximum wind velocity was 22 mph on the second.

100 - Administrative

110 - Superintendent's Special Activities

These consisted of numerous routine inspections and arranging Mr. Demary's itinerary and escorting them around the park and this island, Maui, Kauai and Honolulu.

150 - Plans, Maps and Surveys

The park boundary survey in the vicinity of Kahun was completed by the CCC, and the depths of each crater at their respective lookout points are also being determined by CCC Engineer Foreman Wong.

Survey of the boundary north of park headquarters, where it adjoins the Bishop Estate property, was started by an engineer of the Estate. The beautiful Fern Forest is to be cut up into building lots.

160 - General Publicity

Mr. Demary's visit to the islands evoked publicity in the various island newspapers. The Hilo paper especially contained some splendid writeups.

200 - Maintenance, New Construction and Improvements

220 - New Construction

The fourth employee's cottage constructed at park headquarters by the CCC, job 308, was completed during the month, as was the Hilina Pali horse trail (job 313), and the underground telephone system (U-3). The first of three of the more simple type of cottages under construction by the CCC (job U-4) will be completed the first of next month. The watershed and intake structures in connection with the Haleakula water system, also under construction by the CCC (job U-2) were completed. The employee's cottage, also part of CCC job 308, at Haleakula, was 97% complete.

230 - Special Improvement Activities

CCC - At Kilauea the camp director reports 3 new men enrolled and 7 discharged - 3 honorable, 1 for expiration of term of service and 2 secured employment. There were 4 dishonorable discharges for desertion.
Two hundred one mandays were lost due to operations and other sickness. Operations consisted of one appendectomy and one tonsillectomy. There were 3 minor accidents with a loss of 5 mandays, the balance of 166 were because of colds, etc. A daily average of 165 enrollees were released to the project superintendent during the month of 23 working days. Two safety meetings were held during the month. According to the recreational officer, football is the present big interest — the camp has entered 2 teams in the Hilo Recreation Center league, one 120 and 140 pound team. They have hopes of making a good showing this season. At Haleakala the foreman reports 346 mandays worked, with a loss of only 1 day because of illness. One safety meeting was held at this camp.

300 - Activities of Other Agencies in the Park:

310 - Park Operators

Plans were commenced for the celebration of the 75th anniversary of the building of the first Volcano House, and also the 75th birthday of George Lycurgus, manager of the Volcano House, which will take place at the hotel the 16th and 17th of September. This undertaking will be handled jointly by the Hawaii Tourist Bureau and also the Hilo Chamber of Commerce.

330 - Cooperating Non-governmental Agencies

A traffic safety meeting, called by the Board of Supervisors, was attended on the 21st by Assistant to the Superintendent Moomaw, and CCC project superintendent Rennie.

400 - Interpretation

430 - Research and Observation

432 - Zoology: The park chicken coops are now being fitted with special screening to prohibit bird diseases from being transmitted to the park birdlife, pursuant to an order issued by this office.

Eolesa (Pacific Golden Plover) were first seen in the park August 18, after their Alaska migration. This was 3 days earlier than their return last year. This game bird is now protected for 2 years by territorial law.

433 - Geology: August had the usual fluctuations of seismic activity. Two moderate shocks occurred in the early morning of the 17th, felt here and of Kiluaea origin, and a slight quake later the same morning, was presumably in the same region toward Hina Pali. Most of the earthquakes of the month were of Kiluaea origin. Dr. Jaggar was engaged on the manuscript of "Magmatic Geese" until the 17th, when this paper was mailed to the American Journal of Science. Thereafter some attention was given to the chapter on "History of Hawaiian Craters" in the manuscript on "Craters." The amphibian boat "Honokai" was overhauled and
exhibited to Coast Guard officers on the 7th and 8th, with a view to its possible use by the National Geographic Society expedition to the South Seas. Dr. Jagg held conferences with Capt. Robinson and Mr. Welcher of the US Engineers, on the 18th, 20th and 25th, and an expedition made to the 4th on the 22nd with them, to study places where older obstructions have deflected lava flows. These gentlemen studied this subject for the proposed barrier project to deflect lava flows from Hilo, making expeditions to several parts of this island. The last part of the month was given to the preparation for a camping trip on the north slope of Mauna Loa, to study the effect of bombing the lava flow of 1935. The expedition started out the 31st, Assistant Geologist Waache built a portable radio for the use of the camping trip to Mauna Loa. He was one of the members of the expedition. The Volcano Letter for April-June 1939 was issued by the publications office of the University of Hawaii and in addition to the routine reports, contains a valuable illustrated article by Mr. Waache on "Time Control for Seismographs Operated by the Hawaiian Volcano Observatory."

500 - Use of Park Facilities by the Public

610 - Increase or Decrease in Travel

Total travel to Kilauea section was 28,605 in comparison with 16,242 during August 1938. At Haleakale the ranger in charge reported 2880 as compared with 3405 for last year. During most of the same month in 1938 the inter-island seamen's strike was in effect.

520 - Visitors

On August 19 - the same day the Delegates arrived - Delegate to Congress Samuel W. King, accompanied by Representatives David Terry, Dem., Arkansas; Harold B. Oole, Dem., North Carolina; Iyle E. Boren, Dem., Oklahoma; Sam G. Massingale, Dem., Oklahoma; B. Lane Powers, Rep., New Jersey, had lunch at the Volcano House and made the trip through the park.

Other visitors were Colonel Lanza, USA., and Mrs. Henri, wife of the French ambassador to Tokyo, who is Mrs. Lanza's sister.

600 - Protection

610 - Ranger Service

Seasonal Rangers Ralph K. Shaver and Paul H. Baldwin left the park on the 29th, Mr. Baldwin plans to study at Harvard for his Ph. D. and Mr. Shaver returns to school teaching in North Carolina.
650 - Building Fire Protection

A very minor fire occurred at the Volcano House on August 14, at 1 p.m., when the ventilator hood over the kitchen stove became ignited and burned the wall near it. Damage amounted to $5, and the loss of that day’s lunches for hotel guests. It is also suggested that there was another fire of similar origin later in the month. It was suggested to the hotel management that the coating of grease be removed from the ventilator and we are separately recommending that the operator be requested to increase the amount carried for fire insurance.

660 - Insect and Tree Diseases

Two stakes, one-acre plots were established at Sushi crater, where the ohia trees are dying. In these plots all the dead trees were counted, marked and a record prepared. The purpose of these plots is to ascertain the extent to which the trees are being killed, presumably by volcanic gases in the soil.

680 - Accidents

One minor accident, involving a CCC truck and privately owned vehicle, occurred in August, and reports submitted by all parties concerned. After thorough investigation it was decided this accident was avoidable by the CCC driver and the owner of the private car has submitted claim to the government for damages sustained. Later on in the month a private car crashed into a tree on the side of the main highway running through the park, and both occupants were cut and bruised somewhat. The driver, who had taken his foot off the throttle while passing another car, accidentally replaced his foot on the brake instead of the throttle, locking the brakes and sending the car off to the side of the road.

900 - Miscellaneous

Park Naturalist Gunner Fjørerlund and his wife are the extremely proud parents of Vernon Gerald (their first child) born on August 2.

The entire park staff was upset to learn of the deaths of Richi Kawasaki, the five-year-old son of Acting Foreman Sadachi Kawasaki, August 4, as a result of injuries sustained when he fell out of a tree; and Frankie Lamb, August 17. Frankie was the three-year-old son of former park naturalist and Mrs. Samuel H. Lamb. Mr. Lamb is now with the Biological Survey in Mississippi.

The Territorial Highway Engineer for the Island of Hawaii, on August 9, stated in the local papers that it has become necessary to reduce the road maintenance and construction staff until only a skeleton crew of 20 men remains because of the failure of the last territorial legislature to pass the gasoline tax bill which would have provided funds to meet federal aid allotments. Several projects have been closed in an uncompleted state and all will be halted by February, 1940.
The superintendent and Mrs. Wingate attended the ceremonies marking the reopening of the old Hulihoo Palace in Kailua, on August 12.

The superintendent attended and spoke at a farewell banquet (lumh) on August 15, given by the local bar association, honoring Judge Delbert Metzger, who has been appointed to a judgeship in Honolulu.

One of the local papers carried a UP dispatch from Washington on the 8th, to the effect that the Maritime Commission had ordered the Matson Navigation Company to cancel by September 12 contract rates for carrying lumber from the Pacific coast to Hawaii and removal of prejudicial minimum quantity provisions; after investigating a complaint made by F.A. Smith and Company, Honolulu, which contended that Matson rates were illegal and disproportionate to those charged by other companies. This is of interest to us as the discriminatory quantity and rate provisions have prevented taking advantage of low-priced lumber offered on the mainland.

Eighty four wild goats were killed at Kilauea and 44 at Haleakala.
George Lycurgas, manager Kilman Volcano House, welcomes Mr. and Mrs. Demaray, August 19. Photo by Cunningham.

Mr. and Mrs. Demaray presented with Hui O Pele certificate by Park Naturalist G.O. Pagerlund, on behalf of the park staff. Photo by Cunningham.
Mr. Demaray addressing gathering in Muaka Pauulu at dedication of Stephen T. Mather plaque. Photo by Cunningham.

Mr. Demaray and uniformed personnel of the park after dedication of Mather plaque. Ranger Shaver absent, on duty. Photo by Cunningham.
Laborer John Hauanio explains use of ancient Hawaiian stones to Mr. Demarey on visit to Kalapana at County of Hawaii park. Photo by Moomaw.
CCC crew under direction Landscape Foreman Hollenhoff and Jr. Foreman Makiwewitch setting up boulder prior to placing Mathor plaque. Photo by Cunningham.

Footprint of Hawaiian soldier in 1790 ash. These prints will soon be protected by suitable structures. Photo by Cunningham.
View of Kilauea from Volcano House. Tourist party about to start park tour. Photo by Cunningham.

View toward Mauna Loa through Kilauea Iki. Photo by Cunningham.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

(Kilauea Section) Hawaii National Park for the month of August, 1933

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<td>Cars reentry</td>
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TRAVEL REPORT

Haleakala Section, Hawaii National Park for the month of August, 1933

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August 30, 1939

MEMORANDUM FOR THE SUPERINTENDENT:
Subject: Chief Ranger's Report for August, 1939.

010 INTRODUCTION
Of outstanding importance to the park was the visit of Associate Director A.E. Demaray, to this section during the period Aug. 19 to 23. The Demaray party was contacted by all members of the ranger Div., and the Chief Ranger made the round-the-Island and Humula trip with them.

020 GENERAL WEATHER CONDITIONS
Some rainy days were experienced during the month, substantially relieving the annual park water-shortage and eliminating fire danger. This summer has been considerably wetter than usual and water-shortage and fire danger in the upper grasslands have not been so acute.

120 PARK INSPECTIONS
All close-in areas and roads have been regularly patrolled during the month. Foot patrols were made to Kaone, Na Pau O Hlemakule, Puu Kaone and the Pit Craters, Pepeiao and a motor patrol to 1868 Crack. The Jr. Park Warden spent practically the whole month on mounted patrol in the seacoast area. One mounted patrol was made to Mauna Loa Summit and one mounted trip was made Humula via Puu Oo Trail to take horses over for Dr. Jagger's use.

150 SURVEYS
The Kohue park boundary was run by CCC during the month and a start was made by them to ascertain the depth of each crater at the lookout points.

A survey of the boundary of the Bishop Estate to the north of park headquarters was also made by the Bishop Estate engineer with the aid of one park laborer.

160 GENERAL PUBLICITY
Press releases and photographs of the Demaray visit were made and distributed to Island newspapers.

220 NEW CONSTRUCTION
Two rubbish burning incinerators were constructed, one at the entrance and one at Kipuka Puaulu picnic grounds by park laborers.
230 SPECIAL IMPROVEMENTS
The underground revised telephone system at park headquarters was completed by CCC during the month as were repairs to the Hilina Pali Trail.

410 LECTURE AND GUIDE SERVICE
Special and regularly scheduled tours for park visitors as well as hikes and nature walks were conducted by the rangers with the cooperation of the Asst. park Naturalist. One ranger continued to assist with lectures at the museum.

432 ZOOLOGY
The report of last summers' bird observations and studies which was completed as his Temporary Ranger's duties for the summer was finished and submitted at the end of August by Temporary Ranger Paul Baldwin.

The park chicken coops are now being fitted with special screens to prohibit bird diseases from being transmitted to the park birdlife.

Kolea were first seen in the park Aug. 12, after their Alaska migration. This was three days earlier than their return last year. This game bird is now protected for 2 years by Territorial law.

520 VISITORS
Influential visitors contacted by the Ranger Division included the following:
Mr. & Mrs. A.E. Demaray, NPS Asst. Director, Washington DC.
Mr. & Mrs. E.E. Tillitt, CCC Field Supervisor, Honolulu.
Mr. Charles M. Loomis, Sen., Institute of Pac. Relations, Honolulu.

610 RANGER SERVICE
Temporary Rangers Paul Baldwin and Ralph Shaver terminated their duties for the summer at the end of August.

640 FOREST FIRE PROTECTION
All CCC enrollees were instructed in the use of fire-fighting tools and methods of control during the month in practical demonstration-lessons in the field. Fire prevention posters were posted in several conspicuous places in the park.

650 BUILDING FIRE PROTECTION
A small grease fire occurred in the Volcano House kitchen but was extinguished without doing any damage.

660 INSECT AND TREE DISEASES
Two, staked, one-acre plots were established at Pauahi Crater where the ohia trees are dying. In these plots all the dead trees were counted and marked and a record prepared. The purpose of these plots was to ascertain the extent to which the trees are being killed, presumably by volcanic gases in the soil.

One meeting of the committee on exotic plants was held during the month.
660 ACCIDENTS
One accident involving a CCC truck occurred in Hilo and was investigated and reports submitted by the Ranger Division.

An accident of a private car occurred between park headquarters and the Hilo Entrance. This was also investigated and a report submitted.

Two motorists with car-trouble were assisted during the month.

690 PUBLIC HEALTH
The old Keanakakoi garbage dump which is now not used was cleaned up and the exotic plants removed from that area this month. All gutters were also cleaned of accumulated leaves and rubbish.

660 MISCELLANEOUS
84 wild goats were eradicated in this section during the month and one stray mangy dog mercifully killed.

The park saddle horse known as Hilo Hattie was accidentally killed during the month. This was reported in detail.

Meetings were held during the month of the Safety Committee and the Board of Survey.

Four "No Parking" signs were erected on the sharp curve in front of the Volcano House to eliminate the traffic hazard which existed here.

Joseph W. Christ,
Chief Ranger.
MEMORANDUM TO SUPERINTENDENT WINGATE

THROUGH CHIEF RANGER CHRIST.

Subject: Monthly report for August, 1939.

During this month certain routine duties such as patrol, lighting of lamps, etc. were carried out. Work on the bird problem progressed satisfactorily. A five-day hike up Mauna Loa was made and the higher altitudes were thoroughly studied from the point of view of their bird life. The bird skin collection was put in shape, and the recommendation is made that a special ornithological collection case with shallow drawers be obtained for housing the collection permanently, as was suggested by Acting Director Demarey. The report upon the bird studies was brought to a point very near completion, and about thirty pages of it were stenciled. Arrangements were made with the office secretary for handling the report when it is completed.

On a patrol trip to Milina Pali on August 24, 1939, the undersigned was accompanied by Rangers Schulz and Shaver. A favorable site for collecting sea shells was located about three miles southwest of Ha'au, and about fifty species of marine invertebrates were collected. Most of these were shells, but sea urchins and crabs were also collected. These specimens were cleaned, classified, labeled, and stored in temporary cases as a start towards a marine invertebrate collection for natural history use.

A suggestion is made that a worthwhile natural history project for the park to undertake would be the investigation of the marine fauna to be found along the seacoast within the park. A collection of shells, crabs, sea urchins, fishes, corals, and other marine forms could be made for educational purposes. Studies upon the rate at which the opilio (Helcioniscus exaratus) restocks itself in the face of constant collecting would be of practical value for the management of our marine wild life. Similar studies could be made upon other molluscs and sea urchins. Two persons have expressed interest in such a project in casual conversation. Donald Abbott, now an undergraduate student in Stanford University, is primarily interested in marine zoology and would be glad to have the chance to do something along this line. Dr. Milton A. Miller, Assistant Professor of Zoology at the University of Hawaii, would likewise be willing to
undertake such an investigation. The undersigned would also be able to do it.

Respectfully submitted,

Paul Herbert Baldwin,
Seasonal Ranger.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAI'I

August 31, 1939

Memorandum to the Superintendent
Through the office of Chief Ranger Christ
Subject: Monthly Narrative for August

Duties Performed: On August 1, a staff meeting was held in Chief Ranger Christ's office. He discussed the procedure for each person in the event of an eruption. The time for the public going up Mauna Loa was mentioned, the time being on Wednesday and Sunday.

I conducted a moonlight hike with fifteen people August 1. On August 3 to August 5, a group of five people were on a trip to Mauna Loa Summit, Ranger Cunningham and I being in charge. I have taken my duty on switchboard and putting up the flag at the proper time. Served on routine patrol from August 15 to August 19. Four days have been spent working in the sign shop.

Helped Ranger Jess on the telephone line improvement for three days. I made one trip to Hilina Pali to carry feed and one official trip to Hilo for mail. Put lights in the Lava Tube August 12 and 26.

Have had two tours up Mauna Loa Auto Trail, having a party of five people on August 15 and ten on August 18. Friday August 18, a party of three were conducted on a ride around the Bridle Trail.

August 17, the KMC tour had seventy people. This same date marked a very pleasant event to Hawaii National Parks—the arrival of Acting Director, A.E. Demaray and Mrs. Demaray.

August 25, Rangers Baldwin, Schulz and I made a foot patrol from Hilina Pali to the coast and up the shores to the park boundary, thence by the Kamakahii flow to Pepsiam shelter and followed the trail back to Hilina Pali. We left the park office about 8:30 A.M. and returned at 7:30 P.M. Some specimens of marine life were collected and being left with the park, correctly labeled by Paul Baldwin.

Natural Phenomena: Soil temperatures have been recorded at Puhimau and Pauahi.
August 15 at Puhimau 78-78-102-130-178. (190-192 in vents)
" 16 " 72-74-100-118-178
" 16 " Pauahi 68-66
" 19 " Puhimau 76-78-102-118-178.
The temperature in these regions do not seem to change. The temperature has not varied to any great extent since June 1938 which would appear to indicate that the magmatic material has not moved nearer to the surface at Puhimau or Pauahi.

On August 11, Ranger Olson and I counted the number of dead trees in a given area near Pauahi. Separate report has been given to Chief Ranger Christ. This count is to be continued over a period of years.

Park Regulations: The name, Arthur McGouan, with some writing, was noticed on a sign at Thurston's Lava Tube August 14. The said party was located at KMC. Major Billings ordered Pvt. McGouan returned to Eleventh Field Artillery at Schofield the next day. Lt. Cunningham talked to the men in camp and advised them to observe park regulations.

The driver of Love's Bakery, number 28-875, was speeding at fifty-five miles per hour near the En Entrance August 17. He was advised of park rate of speed.

Accidents: A Chevrolet Sedan, belonging to Kishi Matsuzawa of Hilo, was found wrecked in the park, August 11 about 8:45 A.M. The wreck was investigated by Ranger Jess and detail report given.
Recommendation: That the new park booklet contain a list of the common plants and birds as the one given in the edition previous to the present one. This will be helpful to park visitors who wish to remember the names of plants and birds.

Summary of Public Contacts:

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<thead>
<tr>
<th>Program</th>
<th>Number</th>
<th>Number of People</th>
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<tbody>
<tr>
<td>Hike (Lava Trees)</td>
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<td>3</td>
</tr>
<tr>
<td>Bridle Trail</td>
<td>1</td>
<td>3</td>
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<tr>
<td>Mauna Loa Summit</td>
<td>1</td>
<td>5</td>
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<tr>
<td>Upuaka Paaulu</td>
<td>1</td>
<td>15</td>
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<td>Mauna Loa Auto Trail 2</td>
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<td>15</td>
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<td>General Park Tours</td>
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<td><strong>Total Contacts</strong></td>
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<td><strong>136</strong></td>
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Respectfully submitted,

Ralph K. Sheaver
Temporary Ranger
MEMO. FOR THE SUPERINTENDENT:

THROUGH THE CHIEF RANGER:

SUBJECT: RANGER'S MONTHLY REPORT FOR AUGUST, 1939. (OLSON)

Following is a report of my daily activities for the month of August, 1939:

Aug. 1. Office work on reports. P.M., investigated CCC accident, Hilo.

2. Off Duty.

3. Office work on accident reports.

4. Set seven trail and road signs.

5. Switchboard. Picked up Mrs. Cunningham & Shaver at El.6600.


8. Tour with Honolulu YMCA group under Mr. Ralph Cole, 32 persons in 1 car. FM, repairing toilets at Lava Tube. Cleaned urinal, basins and toilets. They were very dirty.

9. Mauna Loa Tour, 2 persons in 1 car. FM, repairing signs. CCC night patrol, 10.30 to 11.30 p.m.

10. Setting and repairing signs. Painted all outside garbage cans.

11. Worked on park range-finders, cleaning and putting them in condition for use with the Demaray party. FM, established 2 test plots at Pauahi Crater. Counted and marked all dead trees in each plot.

12. KOA Tour, 107 persons in 13 cars. FM, Dance Duty at Hotel. CCC night patrol at 1.30 a.m.


16. Worked on signs. PM, meeting of Exotic Committee in Kipuka Puaulu to justify work being done there to Mr. Moomaw and Fagerlund.

17. 1-day Hike to Puu Huluhulu, 9 persons in 2 cars. PM, Sign painting and office work.

18. Cleaned-up Utility Area with CCC crew and park truck.


20. 24-hour duty for week beginning this date. Mauna Loa Tour, 8 persons in 2 cars. Rain gauge-.51. PM, Kipuka Puaulu with Mr. Demaray and party. Attended dedication of Mather plaque.


23. Patrol.

24. Patrol.


26. Patrol and darkroom.

27. Flag. Off Duty.


29. Returning from Hmuula via Kau.

30. Flag. Office work on reports.


Respectfully submitted,

Gunder E. Olson, Ranger.
Memorandum to Superintendent E. G. Wingate
through office of Chief Ranger.

Enclosed are narrative report, travel report (eight copies),
and weather report for Ranger Station for the month of August 1939.
I will have to delay sending the detailed weather report for the summit
station until the concession operator gets back from a four day vacation.
He forgot to leave me the daily report on visibility when he left today.
Total rain at Pakanoa was about 0.23 as I remember it.

H. A. Powers
Ranger in Charge
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
Hawaii, Maui
August 31, 1939

Memorandum to Superintendent E. G. Wingate through office of Chief Ranger.

The following narrative report of the Haleakala Section for the month of August is respectfully submitted.

000 General

010. Haleakala Section and the Island of Maui were fortunate in being given the opportunity to entertain the Acting Director of the National Park Service, E. Demaray, and Mrs. Demaray. Superintendent E. G. Wingate and Mr. Tillet conducted the visiting party. One day was spent in the Haleakala Section, one day was spent at Meanae CCC camp, and time was sandwiched in to get a glimpse of Iao Valley, to visit one of the deep wells on Central Maui, a sugar mill, a field of sugar cane being harvested by machine at night, and to enjoy a banquet and entertainment given by the Chamber of Commerce of Maui. Those of Maui who met Mr. and Mrs. Demaray fell in love with them, and we hope that they feel the same way toward our Island.

020. Light to moderate trade winds have prevailed throughout the month, bringing many partly cloudy days, but very few stormy days. Five cloudy days were recorded at the Ranger Station and not more than that prevailed in the crater. Rain fell on seven days of the month at the Ranger Station, totaling 1.13 inches for the month. Rainfall at the head of the Halemau trail measured 2.6 in the raincan, but the correction to be applied due to evaporation from the can, as actually measured by the new "evaporator", brings the actual total rainfall at that station up to 6.60 inches. Rainfall at summit was about 0.23 (actual report is late in coming in). A net rainfall of 14.0 inches (not correcting for evaporation) has been measured at Paliku since June 20, with 6 inches of that since August 7. For another month there has been just enough water to keep up with consumption both at the Summit and at the CCC camp.

100 Administrative

120 Park Inspections

121. Superintendent E. G. Wingate spent August 26 in the Haleakala Section with the Director's party.

123. Acting Director E. S. Demaray and Mrs. Demaray inspected the Haleakala Section on August 26.

Ben Moomaw, Assistant to the Superintendent, spent the days from August 24 to August 29 inclusive studying future needs and inspecting current projects.

125. E. S. Mollenhoff, architect with the Kilanae CCC, accompanied Mr. Moomaw studying the various problems.
150. Equipment and Supplies.
Pipe fitting tools and grease guns for the garage were acquired during August. One mule was returned to Haleakula section from the Kesana CCC. One Army rifle and acccessories was returned August 4.

170. Plans, Maps and Surveys.
Preliminary studies were made and necessary plans initiated for:
- An appropriate gateway structure at the Park entrance.
- A master plan and map of the Ranger Station area.
- A master plan and map of the Pahoa Observatory area.
- An operators building near Pahoa Observatory and a water supply system for both buildings.

- Favorable weather permitted finishing cementing up the voids in the stone work of Pahoa Observatory. This completed the preliminary test job of making the building more weather resistant. Careful watch will be kept during the next storms to see that else may be needed.
- A few minor repairs have been completed to the crater cabins and water systems.
- Roofs of the buildings at the Ranger Station area have been repainted. Brown instead of the standard green was authorized by the Acting Director as it blends into the general color tone of the local landscape.

220. Woodwork and cabinet work in the new Ranger Quarters has been progressing very well. Cement floor in the basement has been completed. The stair-well to basement, the front and back steps, and the cess-pool cover, are the main jobs yet to be done on the exterior.
- Work has been started on a bathhouse for the CCC camp.
- Work on the watershed and the intake structures has been completed. Tank installation will be held until prospects for getting water in to protect the floor of the tanks.
- No work was done on trails this month.

400. Flora, Fauna, and Natural Phenomena.
- Twenty-four silver sword plants in flower have been counted to date, seven on Paliku and 17 in the crater of Haleakula. The geraniums have been at the peak of their bloom this month.

500. Use of Park Facilities by the Public.
- The counter registered 576 cars during August. This is an increase of 40% over July, but a decrease of 15% from August of last year. Sixty-five of the cars were Park vehicles, leaving a net of 510 visiting cars.

540. The counter registered 576 cars during August. This is an increase of 40% over July, but a decrease of 15% from August of last year. Sixty-five of the cars were Park vehicles, leaving a net of 510 visiting cars.
- Eleven different parties, comprising fifty people, used the crater cabins or the Old Rest House during the month. Most parties stayed only one night at a cabin.

600. Protection.
- Forty-four goats, 29 male and 15 female, were destroyed this month.

900. Miscellaneous.
The cattle were removed from the National Park area this month by the Haleakula Ranch.

R. A. Powers
Ranger in Charge
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAI
August 31, 1939

MEMORANDUM FOR THE SUPERINTENDENT
THROUGH CHIEF RANGER CHRIST:

SUBJECT: Ranger Report for the Month of August (Schulz)

Duties:
Regular turn was taken at such routine duties as being custodian of the flag, 24-hour duty, switchboard duty, and night check of the CCC camp watchmen.

One day per week was spent on duty at the Volcano Observatory.

Some time was spent in the making, mounting, and employing of road signs.

Fire drill was participated in.

Four days plus some night work were spent in executing the plans made previously for the Thurston Lava Tube shrine.

Aug. 16 patrolled Hili"a road, Aug. 17 Mauna Loa Truck Trail and fire caches with Ranger Jess, and Aug. 24 Hilina Pali road, Pali Trail, seacoast SW to park boundary, and via Pape"u along the top of the pali. Other trails covered in hikes, etc. were: Hilina Iki rim via Byron Ledge, Nepau Crater and Lava Trees, and Footprints and Mauna Iki.

In informational work seven talks were given to 445 persons, and seven trips were conducted for 140 persons.

Four news releases, two letters, and one article for the National Park Service Bulletin were written.

Worked on bird catalog system and also on a master catalog system.

The only contact made with Associate Director Demsey was the attendance of the Mather dedication ceremony along with the rest of the staff and at the headquarters office inspection.

A day was also spent with Ranger Cunningham in the dark room.

Comments:
The heavy rains this spring evidently washed out all the support from under the steel wing cause below Hilina Pali.

The toilet seats have been very nicely repaired and the dumbbell shaped plot of lawn in the museum parking area has been neatly trimmed, both being a great improvement.

Cleats on the museum display cases are still in need of repair however and there remain still two dangerous points along the outside edge of the trail descending into Hilua Iki which should be properly repaired for protection of tourists.

Days off:
Three "days off" were taken as follows: Aug. 6, 13, 27.
Natural Phenomena

Rain gauge readings at the end of the Mauna Loa Truck Trail at 6700 feet elevation were as follows: Aug. 15, .46, Aug. 28, .06.

Attended bird club "Eo a noa" meeting on Aug. 1, 1939 with Rangers Olson and Baldwin. Ranger Baldwin presented a most interesting and stimulating paper on studies of H. N. P. avifauna.

On Aug. 1 five goats were twice seen in the area just below Uwekahuna Museum on the Pali.

Two feral donkeys were seen at Pepeiau and a large flock of goats were seen on the pali in an ohia kipuka about two miles east of this the Pepeiau shelter.

Numerous shells were collected for the N. P. S. collections with Rangers Baldwin and Shaver on the Hilina Pali patrol trip of August 24.

In the third week of August an almost fully grown quail was seen with its parents at about 6000 feet elevation along the Mauna Loa Truck Trail.

Paul Ernest Schulz
Park Ranger.
Memorandum to the Superintendent,
   Through the Chief Ranger.

Subject: Narrative report for the Month of August.

August 1st - Ranger meeting with the Superintendent. Observatory inventory work and routine patrol of the Park in the afternoon.

August 2nd - Worked on shock recorder at the observatory to noon, fire drill for one hour at noon, repaired hose connections on the siamese twin hydrant connections at the warehouse.

August 3rd - Worked 2½ hrs on Observatory inventory, and spent rest of day painting signs for the Aloi crater crack area.

August 4th - All day with Ranger Jess in phone change over, testing and phone repairs.

August 5th - Military camp tour, routine, 7 cars and 62 people. Ran the 35MM projector for three showings during the day as the 16MM projector was inoperative. Spent 2 hours checking the 16MM projector and resoldering the wires melted off during a previous inexpert use of machine.

August 6th - Handled traffic at parking spaces for MMA and Japanese training ship tours, ran the projector for three showings during the day, and performed routine patrol duties rest of day.

August 7th - Day off.

August 8th - Trip was made to Mauna Loa Seismograph cellar to change drum and repair the recording mechanism, to 11 AM. Rest of the day was spent on observatory check of steel office equipment, and some paper work.

August 9th - Entire day was spent in observatory machine shop making repairs to machinery, shortening belts, and repairing camera tripod for Dr. Jaggar.

August 10th - Inventory work ½ day - repairing the Pit seismograph clock (driving) ½ day.

August 11th - Patrol to 1868 crack area accompanied by Ranger Cunningham to cover area and get photographs of crack and tree molds.

August 12th - Phone switchboard - Paper work on inventory in intervals.
August 13th - Switchboard - Paperwork on inventory.

August 14th - Inventory work - Krakatao in HM - 236 attendance.

August 15th - Day off.

August 16th - Day was spent in cleaning observatory machine shop, the jewelry shop and observatory basement preparatory to Mr. Demaray's arrival.

August 17th - To Hilo with Ranger Jess for signs at dock, and feed for Mauna Loa expedition, to noon, HM spent in machine work on shock recorder for observatory.

August 18th - Filed correspondence for Chief Ranger Christ and cleaned up offices in basement - all day.

August 19th - Filed correspondence to noon - routine patrol in afternoon.

August 20th - On observatory and headquarters duties - standing by.

August 21st and 22nd - Inventory and duties at headquarters during Mr. Demaray's visit.

August 23rd - Standing by at observatory for Demaray's inspection trip through the observatory.

August 24th - Observatory routine - Mauna Loa trip to change drums - 3 people went with me.

August 25th - Standing by for ½ day hike in HM and ½ horseback trip in AM - both blanks - pumped tank in back yard full as was not full enough to run into house. Cleaned house troughs that had been missed in the clean up of the week before.

August 26th - Army tour - 7 cars and 66 people - routine patrol in HM.

August 27th - Day off.

August 28th - Ranger Cunningham and myself took Track #1160 with supplies for Dr. Jaggar's trip to bombing area, to Hamuula Sheep Station, leaving park at 8:00 AM arriving Hamuula 6:30 PM - 1 tire blowing out on paved road, one pierced by sharp lava near Hamuula - truck performed excellently.

August 29th - Left Hamuula about 8:00 AM returning park via Kau with Rangers Olson and Cunningham, arriving park uneventfully at 5:00 PM.

August 30th - Observatory routine - Mauna Loa tour and changing drums. 2 cars - 9 people.

August 31st - Observatory repair work and inventory paper work,

Respectfully submitted,

John E. Minter,
Park Ranger.
MEMORANDUM FOR THE SUPERINTENDENT

(Through Chief Ranger)

SUBJECT: Park Warden’s Daily Report for August, 1939

A. B. Medeiros

Aug. 1--Patrolling from Hilina to Bird Park covering Hilina-Uwekahuna trail.

Aug. 2--Day Off.

Aug. 3--At Bird Park horse corral shoeing park horses and preparing riding equipment and feed for the Mauna Loa trip.

Aug. 4--At Bird Park horse corral shoeing park horses and patrolling around Kipuka ki, through 6 tanks, and O-Hikea sections.

Aug. 5--Patrolling around Kipuka Kulalio; through Mauna iki and O-Hikea sections. Also inspecting fence on boundary line along Kapapala side.

Aug. 7--Patrolling from Bird Park covering Uwekahuna, Kau Desert, Mauna iki, Pepeau, to Hilina.

Aug. 8--Patrolling around Hilina along Kalue and Kamooali shore line, covering Pepeau to Hilina. Shot two goats.

Aug. 10--Patrolling from Hilina, covering Kauhini, along Halape and Apua shore line. Shot one goat.

Aug. 11--Patrolling around Apua, Kahue and Halape shore line.

Aug. 12--Patrolling from Halape, covering Kauhini, to Hilina. Shot one goat.

Aug. 13--Patrolling from Hilina, covering Nene, through Chain of Craters; pass old Keauhou road, to Bird Park.


Aug. 15--At Bird Park horse corral. Shod two park horses and pre-
paring material for shore line encampment.

Aug. 16-Patrolling from Bird Park, covering Uwekahuna through Kau Desert-Puu O-Hale, Nene-to Hilina.

Aug. 17-Patrolling shore line from Hilina covering Kauhanii, Halape pass Keauhou, around Apua and Kahue.

Aug. 18-Patrolling shore line from Apua, pass Keauhou, covering Halape-Kauhanii to Hilina. Shot one goat. A 22 caliber Winchester rifle was brought in from one Kahue's camp and delivered to Chief Ranger Christ. The owner is thought to be D. C. Browning.


Aug. 20-Inspection tour to Hinina with park officials-Director Demoray- Superintendent Wingate and Chief Ranger Christ.

Aug. 21-Patrolling around Hilina section.

Aug. 22-Patrolling from Hinina covering Pepeau section and hunting goats. Shot 2 goats.

Aug. 23-Patrolling from Hilina covering Kipuka Nene-Pepeau section and hunting goats. Shot 1 goat.

Aug. 24-Patrolling from Hilina covering Inahou-Nene section and hunting goats. Shot 1 goat.

Aug. 25-Patrolling from Hilina along Kalue and Kamooali shore line.

Aug. 26-Patrolling from Hilina through Kau desert pass Uwekahuna to Bird Park.

Aug. 28-Bird Park-Drove horses in for shore line trips. Hauled horse feed and material to Nene and Hilina for Halape and Apua shelter repairing.

Aug. 29-Patrolling from Bird Park, covering Uwekahuna-Kau Desert-Puu O-Hale to Nene.

Aug. 30-Patrolling from Nene, covering Boundry line at Inahou section pass Halape and Keauhou to Apua, and hauled horse feed and material for Apua Shelter.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

Aug. 31-Patrolling from Apua--pass Keauhou--through Halape--Kauhani to Hilina.

A. B. Mederios:
Park Warden
MEMORANDUM TO THE SUPERINTENDENT
THROUGH THE CHIEF RANGER
SUBJECT: Monthly Report for August, 1939

My duties for the month of August have consisted chiefly of routine work at the Volcano Observatory. In general the routine includes reading the weather records each morning, changing the seismograph drums at the Observatory, Uwekahuna, and the Pit each day and preparing the seismograms for study and smoking the drums for use the following day. In addition the two tilt meters are read each day. On alternate days the Mauna Loa seismograph station is visited and the drum changed. Each Friday a series of points on cracks around Halemaumau and in the Chain of Craters area are measured and the results tabulated. A weekly report on the weather is mailed to Honolulu each sunday and at the end of each month a more detailed summary is prepared. On Monday of each week a report of the seismic activity for the past week is prepared. In general I have been keeping up the above routine with the exception of one day each week when Ranger Schulz takes over part of the routine.

Following is a condensed summary of my activities for the month:

August 1, Serviced the seismographs, read the seismograms to-date and prepared monthly weather report.

2,3, Serviced the seismographs, read seismograms to-date, and prepared monthly Ranger report.

4, Assisted Ranger Schulz in changing seismograph drums and in measuring cracks.

5, Serviced the seismographs and left for Hilo at noon with Dr. Jagger to try out the Honokia.

6, Prepared weekly weather report, serviced the seismographs, and read the seismograms.

7, Serviced the seismographs, prepared Weekly Volcano Report, and inspected Aloi Crater area.

8,9,10, Serviced the seismographs, worked up Tilt charts for both tilt stations and for the Bosch Tilt record, and assisted Mr. Waesche in checking seismograms.

11,12,13, Serviced the seismographs, measured cracks on the 11th, and read the seismograms.

14, Prepared Weekly Volcano Report, worked up seismicity charts and assisted Mr. Waesche in checking records of Teleseisms.
August 15, Read angles on Crater rim points (results did not check), serviced seismographs at the Observatory, and read seismograms to-date.

16,17, Serviced seismographs, read seismograms, and went to Hilo the afternoon of the 17th.

18, Changed seismograph drums at the Observatory and read angles on points on Crater rim.

19,20,21, Serviced seismographs, assisted Mr. Waesche in reading seismograms, and attended dedication of Mather plaque afternoon of the 20th.

22,23, Read seismograms and worked on a graph showing hour of occurrence of earthquakes.

24, Went to Hilo with Dr. Jaggar to try out the Honokia.

25, Assisted Mr. Waesche in measuring cracks and read seismograms.

26,27, Off duty.

28, Prepared Weekly Volcano Report and plotted seismicity chart to-date.

29,30,31, Serviced seismographs, read seismogram, plotted location of earthquakes for July, and prepared monthly weather report.

Respectfully submitted

Fred M. Ballard
Seasonal Ranger

During the month we enrolled 3 new men and discharged 7. 3 honorable discharges, 1 for expiration term of service and 2 who secured employment. 4 dishonorable discharges for desertion.

There was a total of 301 mandays lost during the month due to operations and sickness.

One appendicitis and one sinus operation. 5 mandays lost due to 3 minor accidents. The balance of 166 mandays lost due to colds etc.

The recreational officers report shows losses of sport activities in the camp. Football is the highlight now, we have entered two teams in the H.R.C. league an120 and 140 lbs team. The boys elected Mr. Judd as Coach of these teams, and we are in hopes of making a good showing, this year.

Two safety meetings were held during the month.

The project superintendents report shows a daily average of 165 enrollees released to him during the month of 23 working days, making a total of 3791 mandays worked on the projects.

Job U-2 Water System (Maui)
266 mandays used on this project.

U-3 Underground Telephone System
277 mandays used on this project which is 95% completed.

B-4 Employees Cottages
379 mandays used on this project under the supervision of Park carpenter Kawasaki. Cottage #1 will be completed next month.

217 P Telephone Maintenance
115 mandays were used on this project

223 P Landscape Maintenance
155 mandays were used on this work around the rimroad.

227 RT Road & Trail Maintenance
243 mandays were used on this project most of it on repair of Mauna Loa Horse Trail

250 P Removal of Exotics
625 mandays used on this project

308 Camp Construction & Construction of Personnel Cottages
244 mandays used on this project here and at Maui. The fourth cottage is 100% completed and the last one about 50% completed.

315 Horse Trail, Hilina Pali
271 mandays used on this project which is now completed.
Work continues on some 11 other projects in the Park.

The Camp Director made his regular weekly visits.

Haleakala Section, Hawaii National Park, Maui, T. H.

The foremen report shows 346 mandays worked on projects.

There was was a loss of one day due to sickness. The doctor made his regular monthly inspection.

The water shed frame completed including flume.

The ranger cottage is 97% completed.

One safety meeting held at this camp.

Associate Director, A. E. Demery and Supervisor W. E. Tillets with their wives visited both camps this month. Park Superintendent E. G. Wingate was with the party at Maui.

Respectfully submitted,

Frank C. Huston,
Camp Director,
CCC BNP
Mr. Edward G. Wingate, Superintendent
Hawaii National Park

SUBJECT: Report of the Hawaiian Volcano Observatory August 1939

Dear Mr. Wingate:

The month of August had the usual fluctuations of seismic activity with no volcanic outbreaks. It was a time of many summer visitors and more field activity than is usual during the winter months.

Volcanic Activity of the Month

The following are the local volcanic data of the month:

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<th>Seismicity</th>
<th>Slides</th>
<th>Crack Openings</th>
<th>Local tremors and Quakes</th>
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Two moderate shocks occurred in the early morning August 17 felt here and of Kilauea origin, and a slight earthquake later the same morning was presumably in the same region towards the Hilina Pali. Most of the earthquakes of the month were of Kilauea origin.

Work of the Volcanologist

Dr. Jagger was engaged on his manuscript of "Magmatic Gases" until August 14, when this paper was mailed to the American Journal of Science. Thereafter some attention was given to the chapter on "History of Hawaiian Craters", in the manuscript on "Craters".

Some time was given during the month to the amphibian boat "Honukai" which was exhibited to Coast Guard officers August 7-8 and is now ready for action, for a demonstration to these officers in a garage in Hilo.
During the first week of the month letters were sent to members of the Research Committee on the subject of the requirements for the seismograph hut on Haleakala, and some suggestions have been received.

August 10-11 an expedition was made with Forester L. W. Bryan to the several C.C.C. camps at Waimea and on the high slopes of Mauna Kea returning by way of Hukauma.

During the last half of the month the laboratories were put in order for the visit of Associate Director Demaray who visited the Hawaiian Volcano Observatory August 23, and was conducted to the Chain-of-Craters and the Mauna Loa trail regions August 19 and 21. Mr. Demaray was shown the amphibian boat in Hilo August 25 after his address at the Rotary Club.

Conferences were held with Captain Robinson of the U.S. Engineers and Mr. Belcher of the same organization August 18, 20, and 26, and an expedition was made with them to the Kau Desert August 22 to study places where older obstructions have deflected lava flows. These gentlemen studied this subject for the proposed barrier project to deflect lava flow from Hilo, making expeditions to several parts of this island.

The last part of the month was given to preparation for a camping trip on the north slope of Mauna Loa the first week of September designed to study the effect of bombing the lava flow of 1935. Actual start for camp was made August 31.

During the last week of the month Dr. Jagger acted as Superintendent in the absence of Superintendent Wingate accompanying Mr. Demaray to the other islands.

Work of the Assistant Geologist

Assistant Geologist H. H. Waesche was on leave August 1 to 7 inclusive in Honolulu. He collected gas samples at Sulphur Bank as usual for the monthly study by Dr. Ballard. On August 11 two new crack locations along the Chain-of-Craters road were marked for repeated measurement.

While Mr. Waesche was away Dr. Ballard carried on the seismological work and the weekly reports. Owing to some difficulty Dr. Ballard and others in receiving time signals, Mr. Waesche on his return re-constructed portions of the radio amplifier to facilitate its use by others.

Mr. Waesche completed measurements of earthquakes, tilt etc. to July 31 inclusive, assisted Dr. Ballard with his research on earthquake occurrence relative to tides; and assisted Rangers Minter and Schultz respectively with construction of new annunciator and Thurston Lava Tube chart. A portable radio was built August 29-30 for use on the coming Mauna Loa camping trip. Mr. Waesche left on this trip with Dr. Jagger August 31. He had during the month some fifty to seventy-five visitors to attend to at the Observatory building. This is excessive, and seriously interferes with study and research.
Work of the Assistants

S. Sato was occupied in continuation of inspection of seismograms, and clerical and library work.

Summer Ranger Dr. Bullard has gained much experience by having charge temporarily of the Observatory routine from time to time and has continued his research on seismometric statistics.

A suggestion that for some period of time in the future an exchange be effected between Dr. Bullard of the University of Texas and Mr. Weeche of this Observatory is worthy of serious consideration for the mutual advantage of the men and institutions.

H. Nakano has continued his typing of the manuscript list of all Hawaiian earthquakes and this provides a document which will be of the utmost value to the Observatory.

H. Yasunaka under the Volcano Research Association continues his work on a half-time basis as assistant to the volcanologist in various outdoor capacities.

Publications and Visitors

The Volcano Letter for April-June 1939, No. 464 was issued by the Publication Office of the University of Hawaii during the month, and in addition to the routine report on Observatory measurements, contains a valuable illustrated article by H. H. Waesche on "Time Control For Seismographs Operated By The Hawaiian Volcano Observatory".

Visitors were:

Col. Lanza, U. S. Army
Mme. Henri, wife of the French ambassador to Tokyo.

T. A. Jaggar
Principal Scientist
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

MONTHLY REPORT
JULY 1939

IMPORTANT
This file constitutes a part of the official records of the National Park Service and should not be separated or paper 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.

ARNO B. CAMMERER
Director.
MEMORANDUM FOR THE DIRECTOR:

There follows the report of activities in Hawaii National Park for July.

000 - General

Not only was July in the park generally favored with the same pleasant weather as last year but it brought a considerable increase of visitors to enjoy it, both from the islands and abroad. To accommodate them it was necessary to expand the ranger and naturalist activities. In this the seasonal men were of much help.

On the 19th word was received that Acting Director and Mrs. Dimaray would visit the park during August. This was particularly good news as Hawaii has not had a visit from the Director since Mr. Nather was here in 1927.

Except for the increase in visitors activities were normal for the month, including the usual annual reports and inspections to determine maintenance requirements for the year. An unusual number of large cracks developed in the roadways and had to be dug out and repaired. Rangers were assigned an extra duty of irregular unannounced night inspections of the CCC camp since on such a previous inspection the superintendent had found both night watchmen asleep.

A hurried study was made of the Proposed Report prepared by Examiner Braham for the Maritime Commission in the Inter-Island rate matter and the Director requested to have filed for the superintendent an exception to the inclusion of the Kona Inn as common carrier property, and other items.

020 - General Weather Conditions

On the whole, July was quite a dry month, despite the fact there were no clear days at headquarters, with only 4.96" of rainfall at Kilauea and 2.15" at the Haleakala ranger station and .19" at the Haleakala observation station. Maximum wind velocity at Kilauea was 30 m.p.h on the 27th; maximum and minimum temperatures were 76.5 and 51.2 degrees respectively at Kilauea; and 76 and 43 degrees at Haleakala ranger station. At Haleakala a can to measure rainfall evaporation was put in operation in connection with that at 7500 feet near the Haleakula trail. The evaporator showed a total evaporation of .33" during 23 days of operation, equivalent to 3.3" of rain.
100 - Administrative

110 - Superintendent's Special Activities

The superintendent went to Honolulu on the 12th and returned on the 16th. This trip was for the purpose of attending a meeting of the Land Planning Committee of the Territorial Planning Board of which the superintendent is a member. This meeting was of importance to the park in that methods of large scale destruction of introduced and native plant pests such as guava, lantana, saali and pukalani were discussed as well as the problem of providing decent livelihood for the unemployed population of the territory. Contacts were also made with the Honolulu representative of the Civil Service Commission in connection with examination for our vacant mechanic-instrument maker position and also for the filling of our clerk-telephone operator position in addition to matters pertaining to the local board in the park. He also discussed the matter of the proposed new hotel in Hilo which will compete with the Volcano House. Together with Camp Director Huston, he was among the official reviewers of the July 4 parade in Hilo. Numerous routine inspections were made in the Kilauea section.

130 - Investigations of New Park Areas

One trip was made to Kaleopana to advise Hawaiian residents there concerning their special rights in the lands of Apua and Kahoe which had been acquired by the park under the Act adding the Kaleopana area. At this time two Hawaiian families again offered to donate their land to the park in accordance with provisions of the Act.

150 - Plans, Maps and Surveys

The master plan was received July 12 and signed on the 18th.

The survey of the realignment of the round-the-island road was completed by the Bureau of Public Roads, cross sections have been plotted and plan sheets are being traced. It is estimated that the plans will be completed the early part of August, and that the cost for this proposed project will be in the neighborhood of $180,000.

A survey was commenced by the CCC engineer foreman to mark the new northeast park boundary along the land added to the park by the Act authorizing the Kaleopana addition.

A survey of the possibilities of valuable meteorological observations at the summit of Haleakala was made on the 26th by a party made up of Dr. Stanley Ballard of the University of Hawaii and Research Associate in Geophysics of the Park Service; Lt. H.E. Strange, USN, Aerological officer of the Fleet Air Base Pearl Harbor; Colonel Dicknell, Inter-island Airways; and Dr. H.A. Powers, Ranger in charge of the Haleakala section.

2
210 - Maintenance

An inspection was made of all park buildings by the superintendent, assistant to the superintendent, chief clerk and chief ranger for the purpose of estimating maintenance requirements for the year.

220 - New Construction

Project B-4 CCC, 3 employees' cottages of the more simple type, has one unit 70% complete; and all materials have been hauled. The underground telephone system, project U-2, being constructed by the CCC was 75% complete at the end of July. Realignment of the Hiliie Pali horse trail by the CCC was commenced and a spike camp installed at the shelter in that location to house this gang. The ranger's cottage being constructed by the CCC at Haleakala, project 308 was 95% complete and the remaining two at Kiluea, same project, were 90% and 95% finished at the end of July. The water catchment shed for the water system, project U-2, at Haleakala, was approximately half finished at the end of July.

230 - Special Improvement Activities

CCC - Seventeen new enrollees were admitted and 19 discharged; 12 honorable discharges - 4 for employment, 2 for school, 1 medical and 5 for end of term of service; 7 dishonorable discharges were given for desertion. There was a total of 327 mandays lost on account of sickness. Two operations were performed for appendicitis and 4 miscellaneous minor operations caused a loss 26 mandays. The balance was because of whooping cough, flu and colds. It was necessary to quarantine the camp for a few days because of the many cases of flu and whooping cough. The project superintendent reports a daily average of 163 enrollees released during the month of July working days, making a total of 3100 mandays worked. Two safety meetings were held, attended by the entire camp. The safety assistant's report stated rules and regulations are being carried out by the camp.

The foreman in charge of the Haleakala camp reports there was a loss of only one manday because of sickness, and 364 mandays worked. One safety meeting was held. The grading for the floor and foundation of the new bath and wash house is finished with forms in place for the foundations. The camp surgeon reports the camp in a healthy condition and the boys well nourished. Camp Director Huston inspected this camp during the week of July 23 to 29. On the invitation of the ranger in charge of the Haleakala section, the CCC camp and ranger quarters were inspected by Dr. F.E. Trotter, and Messrs. S.W. Tay and L.H. Barschler of the Territorial Board of Health.
Activities of Other Agencies in the Park

Cooperating Governmental Agencies

The regular quarterly dinner and meeting of the Federal Business Association was held at the Volcano House on the 8th. Music and entertainment was furnished by the local CCC enrollees.

Interpretation

Lecture and Guide Service

Special groups to which lecture and guide services were supplied in July included 20 Japanese wrestlers from Honolulu; 102 children from the Pahoa Japanese language school; 26 Japanese amateur singing contest winners, and 15 members of the Honolulu YMCA.

Research and Observation

Botany: The ranger in charge of Haleakula reports that a good number of silverswords are now in bloom in the crater and that several parties of amateur photographers have had "good hunting." Otto Degener, botanist of Honolulu, author of Flora Hawaiiania and Plants of Hawaii National Park, accompanied by 3 assistants, arrived at Haleakula for the purpose of collecting plants of that region. He expects to be in that vicinity for about 6 weeks and will give the park a complete collection of the specimens gathered.

Zoology: On July 3, copy of the Preliminary Report upon Bird Studies Carried out in Hawaii National Park during the summer 1938 by Paul H. Baldwin, CCC Senior Foreman (Wildlife) was submitted to the Director's office, accompanied by copy of memorandum issued by this office requesting those persons having chicken pens to keep them screened with fine wire, in order that certain diseases transmitted by the English sparrow and myna bird from domestic fowl to native forest birds may be held at a minimum.

Geology: There was some seismic activity during the month at Kiluaea distances and at distances somewhat greater than Mauna Loa. A slight earthquake 15 miles from the observatory was felt July 5 and a stronger shock on the 14th was generally felt. The latter was located 10 miles deep under Kilauea Felt where there has been considerable avalanching. Three slides were reported there the 25th. Dr. Ballard spent 2 nights at the summit resthouse on Mauna Loa, and while there sketched condition of the crater floor and made notes on the 1935 rift cone. Dr. Jaggar was engaged on the manuscript of "Magmatic Gases" until July 18, when he went to Honolulu for a week. A start was made in retyping the manuscript of all Hawaiian earthquakes. The revising of these manuscripts will gather together a monograph on the statistics of all quakes at the observatory, which it is planned to expand by including relating volcanic events and pictures of typical seismograms. An office in the University of Hawaii was assigned to Dr. Jaggar for occupancy as representative of the Kiluaea laboratory during his stay in Honolulu.
visits to Honolulu. This extension of the recording, etc., of the work of the research of the Hawaiian Volcano Observatory, will fit in efficiently to the increased cooperation of the university expectable during the next 2 years. While in Honolulu he also visited Mr. A.M. Carter of the Parker Ranch, who expressed willingness to assist in an investigation of the north slope of Mauna Loa by loan of men and animals when the volcanologist hopes to camp for more than a week at the location of the 1935 bombing. Arrangements were also made with Captain Coffin of the USCG Rover B. Teney, to show the amphibian boat with a view to its possible service in the lagoon of one of the coral islands of the South Seas. Dr. Jagger also visited L.W. deVis-Norton, Secretary of the Volcano Research Association who has been seriously ill since December necessitating amputation of his right shoulder and arm. Mr. deVis-Norton is recovering nicely but is still very weak.

500 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

Total travel to Kilauea amounted to 29,177 persons as compared with 15,044 for July 1938. This large increase is no doubt due in part to the fact that last year the Inter-Island seamen's strike was in full away. At Haleakala there were 2100 visitors as compared with 1755 for last year.

530 - Visitors

July 7 - Mr. and Mrs. Cheney Cowles of Spokane, Washington. Mr. Cowles is editor of the Spokane Daily Chronicle. Superintendent and Mrs. Wingate had luncheon with them at the Volcano House.
8 - General Hugh Fyfeiii, USA, Honolulu
9 - Dr. Francis E. Rance, Chemist Hawaiian Sugar Planters Association, Honolulu.
10 - Dr. Lackman, Agronomy Department, Cornell University
12 - Professor A.H. Winchell head of Geology Department, University of Wisconsin, and his son, Dr. Erase Winchell, who is a geologist with the Board of Water Supply, Honolulu.
13-22 Mrs. Lawrence Tibbett, wife of the famous opera singer, accompanied by her 3 children.
24 - General Harron, Commanding Hawaiian Department, USA
26 - Mr. and Mrs. Albert Spalding, overnight. Mr. Spalding is a well-known concert violinist.
39 - C.R. McCarthy, Associate Professor of Geology, University of North Carolina.

600 - Protection

610 - Ranger Service

Dr. H.A. Powers, who has been acting ranger in charge of the Haleakula section since Ranger Peck's transfer to Sequoia, received a promotion to Ranger Peck's vacancy, grade 9, $2000, effective July 1. Robert L. Plunkett, who was selected from a local Civil Service register for the position of junior park warden entered on duty at Haleakala July 8. James A. Cunningham
of Honolulu entered on duty as seasonal ranger at Kilauea July 1.

**620 - Police Protection**

Several persons were apprehended for infractions of park rules and their cases properly disposed of. Excellent cooperation by the authorities at Kilauea Military Camp was received in this respect.

**650 - Building Fire Protection**

The quarterly fire inspection was held in July. All buildings in the park, including those of the operators, the CCC camp and private homes, were checked for fire hazards and corrections made wherever needed. One fire drill was held at the CCC camp.

**680 - Accidents**

One minor accident involving a CCC truck and a privately owned car occurred, and a report forwarded your office.

**690 - Public Health**

Sanitation inspection of the CCC and Volcano House was made at the same time as that of the fire inspection.

**900 - Miscellaneous**

There were 10 wild goats disposed of at Kilauea and 22 at Haleakala.

Boys from the CCC camp marched in the Fourth of July parade in Hilo and made a good showing.

Edward G. Wingate
Superintendent
Employees' quarters Haleakala, CCC Job No. 306, nearing completion. Elevation about 6800 feet looking northwest across sugarcane fields of central Maui toward West Maui mountains. Distant clouds are over islands of Lanai and Molokai. Photo by Ranger Powers

CCC Job U-2 Water System Haleakala. Picture shows supporting framework for galvanized iron rainshed which will supplement water supply from adjacent intermittent stream. Photo by Ranger Powers
Dry warm weather during July brought many of the ohia lehua into full flower. This lone specimen on the west of Kilauea crater had a mass of crimson pompos blossoms at the time this picture was taken. Photo by Ranger Cunningham.
Series of four views on trip from Kiluaea to summit of Mauna Loa. This two or three day horseback or foot trip is becoming increasingly popular.

Looking southwest toward Pacific ocean from near end Mauna Loa truck trail, elevation 8700 feet. Photo by Hanger Cunningham.
Course of central lava river near source of pahoehoe flow at cinder cone Poheku Healei about elevation 12,000 feet, northeast rift Mauna Loa. Photo by Ranger Cunningham.
Lava tunnel or cave near summit Mauna Loa. Ice is found in these caves the year round and until the summit shelter and tank were built in 1934 provided only source of water.
Close-up ofropy pahoehoe lava in Mokuawoweo crater, summit
Mauna Loa - 1983 lava flow. Photo by Ranger Cunningham.
Hilina Pali region Kilauea section. This region, long ravaged by goats, now almost completely exterminated, is devoid of any young tree growth whatever, and remaining old forest almost entirely ohia lehua. Small stump in foreground is mamane, once common here but destroyed by goats. Planting and natural reproduction should largely restore this region. Photo by onger Cunningham.
Steaming area and sulphur deposits on Chain-of-Craters road. This is a favorite spot of the few visitors whose time schedules permit them to visit it. Photo by Ranger Cunningham.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

(Kilauea Section)

Hawaii National Park for the month of July, 1939

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UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

Haleakala Section, Hawaii National Park for the month of July, 1939

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Memorandum to Superintendent E. G. Wingate
through office of Chief Ranger.

Enclosed are the weather reports, the monthly travel report (eight copies), and the narrative report for the Haleakala Section for the month of July, 1939.

H. A. Powers
Ranger in Charge
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII
Wailuku, Maui
July 31, 1939

Memorandum to Superintendent E. G. Wingate through office of Chief Ranger.

The following narrative report for the Haleakala Section for the month of July is respectfully submitted:

000 General
010 Introduction. Park Warden Robert Plunkett started on his duties on July 5. He is spending most of his time in the Crater. Water supply at Pakaoao Observatory is getting critically short again. The supply is just holding its own at the CCC camp.

020 General Weather Conditions. Light to moderate trade winds have prevailed throughout the month, bringing a number of light showers but no heavy rains. There were but three cloudy days at the summit during the month. Total rainfall at Pakaoao was 0.17 inches, divided up into three different showers. Rainfall at the Ranger Station was 2.15 inches, falling on 14 different days. Only one day was cloudy all day, and 17 days were clear. A can to measure evaporation has been put in operation in connection with the rain can at 7500 feet near Halemaumau trail. The rain can showed an unadjusted rain for the month of 4.5 inches. The evaporator showed a total evaporation of 0.33 inches (during 23 days of operation), equivalent to 3.3 inches of rain. Thus actual rainfall was 7.8 inches instead of the apparent 4.5 inches. Rainfall at the new water shed was 4.2 inches. Maximum and minimum temperatures at the Ranger Station were 76 and 43 respectively.

100 Administrative
120 Park Inspections by
125. Camp Director F. C. Huston spent July 24 to 26 inclusive in an inspection of the CCC camp and work projects.
127. On the invitation of the Ranger in Charge, the CCC camp and Ranger Quarters were inspected by Dr. F. E. Trotter, S. W. Tay, and L. H. Herschel of the Board of Health of the Territory of Hawaii.

170 Plans, maps and surveys.
A survey of the possibilities of valuable meteorological observations at the summit of Haleakala was made on July 26 by a party made up of Dr. S.S. Ballard, University of Hawaii, Lt. H.B. Strange, U.S.N., Col. Bicknell 141 Airways, and the Ranger in Charge.
Preliminary sketches of a proposed operators quarters at Pakaoao were sent over from the Park Headquarters. Discussion of the plans has been started by correspondence.
200 Maintenance, Improvements, and New Construction.

230 New Construction.
All work on the Ranger Quarters during the month was inside finishing. Installation of cane ceilings and interior walls is nearly complete. Tongue and groove flooring is laid and sanding and scraping is nearly complete.
Grading is completed for a proposed bath house and laundry building at the CCC camp.
The wood framing for the watershed is four fifths completed. Most of the materials for the water system have arrived and are hauled to the job.
Rough work on the trail connecting the Park entrance with the Halemaum trail is about half completed.

400 Flora, Fauna, and Natural Phenomena.
490 A good number of silver swords are now in bloom in the Crater. Several parties of amateur photographers have had "good hunting".
Otto Degen of Honolulu, and three assistants are "botanizing" in the Park for about six weeks.

500 Use of Park Facilities by the Public.
510 Travel during July was greater than during June, and also greater than July of last year.
540 A party of eight scouts spent one night in the Old Rest House, and a party of four spent two nights in the crater cabins.

600 Protection
640 Twentytwo goats, 5 female and 17 male, were destroyed during the month of July.

H. A. Powers
Ranger in Charge

During the month we enrolled 17 new enrollees and discharged 19. 12 Honorable discharges, 4 for employment, 2 for school, 1 medical and five for end of term of service. There were 7 dishonorable discharges given for desertion.

There was a total of 327½ mandays lost during the month due to sickness. Two enrollees operated upon for appendicitis. This with 5 operations for tonsillitis and one circumcision, caused a loss of 26 mandays. The balance of 235 mandays were lost due to whooping cough, colds, influenza and miscellaneous causes.

Two recreational meetings were held during the month attended by the entire camp. Baseball, horseshoes, chinese checkers, checker, and indoor baseball were the main activities of the camp this month.

Two safety meetings were held during the month attended by the entire camp. The safety assistants report states that the safety rules and regulations are being carried out by this camp.

The project Superintendent report shows a daily average of 163 enrollees released to him during the month of 19 working days, making a total of 3100 mandays worked on the projects.

Projects:

U-3 Underground Telephone System
94 mandays used on this project. Work about 75% completed.

M-4 Employees Cottages
189 mandays used on this project. Materials are hauled and the first unit 70% completed.

M-9 Minor Road Improvement & Tennis Court
357 mandays used on this project, 80% completed.

249-F Field Planting
36 mandays used on this project planting in Bird Park.

250-P Removal of Exotics
500 mandays used on this project at Bird Park and around Headquarters area.

Work continues on some four other projects in the Park.

The camp doctor made his regular weekly trips and inspections.
Haleakala Section, Hawaii National Park, Maui, T. H.

The foreman's report shows 364 man-days worked on projects.

There was a loss of 1 day by sickness.

One safety meeting was held during the month.

The ranger cottage is some 95% completed.

U-2 Water System
227 man-days used on this project with the water shed some 50% completed.

The grading for the floor and foundation of the bath and wash house is finished with the forms in place for the foundation.

Dr. Jones report shows the camp in a healthy condition and the boys well nourished.

The camp Director visited this camp during the week of July 23rd to 28th.

Respectfully submitted,

Frank C. Huston,
Camp Director,
CCC BHP
HAWAII NATIONAL PARK - FOOTPRINT AREA SURVEY.

Report No. 4                                                                July 12, 1939.

On this date the projected location had been run in the
field and all field work had been completed with the exception
of a field tie at the connection with Project 3-B. The field
party was requested to obtain additional profile data beyond the
southerly end of the project in order to establish a permanent
grade at the connection with the Territorial Highway. Field
work was completed on June 16, cross sections have been plotted
and plan sheets are being traced. It is estimated that the
plans will be completed in the early part of August.

Frank R. Carlson
Assistant Highway Engineer.
August 4, 1939

Mr. Edward G. Wingate, Superintendent
Hawaii National Park

SUBJECT: Report of the Hawaiian Volcano Observatory July 1939

Dear Mr. Wingate:

The month of July as usual brought many scientific visitors and there was some seismic activity during the month at Kilauea distances and at distances somewhat greater than Mauna Loa.

Volcanic Activity of the Month

The following are the local volcano data for the month:

<table>
<thead>
<tr>
<th>Week ending</th>
<th>Seismicity</th>
<th>Slides</th>
<th>Crack openings</th>
<th>Local tremors and quakes</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 9</td>
<td>13.50</td>
<td>0</td>
<td>3.0 mm. closed</td>
<td>40</td>
</tr>
<tr>
<td>16</td>
<td>15.20</td>
<td>0</td>
<td>7.5 &quot; opened</td>
<td>56</td>
</tr>
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<td>23</td>
<td>16.90</td>
<td>0</td>
<td>2.0 &quot; closed</td>
<td>70</td>
</tr>
<tr>
<td>30</td>
<td>10.25</td>
<td>1</td>
<td>3.5 &quot; opened</td>
<td>27</td>
</tr>
</tbody>
</table>

A slight earthquake fifteen miles from Observatory was felt July 5, and a strongish shock July 14 was generally felt. The latter was located ten miles deep under Hilina Pali where there has been considerable avalanching. Three rock slides were reported there July 25. Choking fumes were reported on upper Mauna Loa trail July 7. Distant earthquakes were recorded July 6, July 17 and July 21. Dr. Ballard and others spent two nights at Hu-a-Pele summit house of Mauna Loa July 20-21, sketched condition of crater floor and made notes on 1935 rift cone. The seventy disturbances of the third week were mostly tremors.

Work of the Volcanologist

Dr. Jaggar was engaged on the manuscript of "Magmatic Gases" until July 16, when he went to Honolulu for a week and his manuscript was criticized by Dr. Hanco and Dr. Eddy.

A start was made in retyping the manuscript of all Hawaiian earthquakes, with the assistance of H. Nakano, typist kindly furnished by Manager Huston of the C.O. C. camp. The revising of these manuscripts will gather together a monograph on the statistics of all earthquakes at the Observatory, which it is planned to expand by including relating volcanic events and pictures of typical seismograms, photographed by Ranger Cunningham from the original
instrumental record.

In Honolulu, office room No. 8, Hawaii Hall, was assigned to Dr. Jaggar for occupancy as representative of the Kilauea Laboratory of the University during his visits to Honolulu, and a good steel desk and other suitable furniture were provided. This extension of the recording, writing and publishing parts of the work of research of the Hawaiian Volcano Observatory, will fit in efficiently to the increased cooperation of the University expectable during the next two years.

While in Honolulu Dr. Jaggar visited Mr. A. W. Carter of the Parker Ranch who expressed willingness to assist in an investigation of the north slope of Mauna Loa by loan of men and animals about the end of August, when the Volcanologist hopes to camp for more than a week at the bombing locality of 1935. Arrangements were also made with Captain Coffin of U.S.C.G. Steamship Taney to show him the amphibian boat during an approaching visit to Hilo, with a view to its possible service in the lagoon of one of the coral islands of the South Seas. The Volcanologist also visited Mr. L. E. de Vis-Horton, Secretary of the Volcano Research Association who has been seriously ill since December necessitating amputation of his right shoulder and arm. He is now recovering but is very weak.

Work of the Assistant Geologist

Mr. H. H. Waescohe has been engaged in preparing the seismological reports for the Volcano Letter of the quarter year ending June 30, and he has prepared an illustrated paper for the same publication on "Time Control for Seismographs Operated by the Hawaiian Volcano Observatory".

Mr. Waescohe has been engaged in correspondence with Lieutenant E. Q. Hsaton, in charge of Coast Survey work, Honolulu, with reference to corrected list of recent earthquakes and tide records. On July 17 he overhauled the seismograph at St. Mary's school, Hilo. On July 20 he investigated phone Line No. 10 and found a short circuit. All the time controls on the four stations Observatory, Halemawain, Uwekahuna and Mauna Loa are working satisfactorily. On July 21 gases were collected in the monthly series at Sulphur Bank and the tubes shipped to Professor Bullard. Some seventy-five visitors came to the laboratories and required much time.

Work of the Assistants

S. Sato of the University of Hawaii was occupied in typing manuscript and in inspection of seismograms for rejection.

A. Okuda was given leave by the Research Association July 8-15, and thereafter was unemployed until such time as he may be reinstated under the Civil Service.

Summer Ranger Dr. Ballard has been making diagrams of seismometric and tidal statistics from the Observatory records, and made an expedition up Mauna Loa July 18.
Ranger Minter has been rebuilding the earthquake annunciator so that its adjustment will be better made and more flexible for service. Ranger Schultz and others have taken their share in the routine of the Observatory.

Materials and Equipment

The Observatory has to acknowledge with gratitude the receipt of a large quantity of valuable electrical material, radio parts, relays and the like from Mr. Oliva, who has recently left Hilo for a post in Honolulu, and was an acquaintance of Messrs. Minter and Hassoe in the amateur radio construction field.

Visitors

July 4, Chester Blacew, instructor in shopwork, Hilo High School.
8, General Peyton, U.S. Army, Honolulu.
15, Dr. Francis E. Hancox, chemist, Experiment Station, Hawaiian Sugar Planters' Association, Honolulu.
15, Professor Buckman, Agronomy Department, Cornell University.
22, Professor A. N. Winchell, head of Geology Department, University of Wisconsin.
22, Dr. Horace Winchell, geologist, Board of Water Supply, Honolulu.
24, General Herron, commandant, U.S. Army, Honolulu.
29, G. R. MacCarthy, Associate Professor of Geology, University of North Carolina.

T. A. Taggar
Principal Scientist
MEMORANDUM FOR THE SUPERINTENDENT:

Subject: Chief Ranger's monthly report, July 1939.

010 - Introduction

No unusual events took place during the month.

020 - General Weather Conditions

Weather conditions for the month have been good throughout, with many clear days and only occasional showers.

150 - Plans, Maps and Surveys

A survey was begun by CCC Engineer Wong to mark the northeast boundary of the new Agua park addition.

160 - General Publicity

One press release was prepared by Ranger Schulz.

210 - Maintenance

Refilling of the cracks on the Chain-of-Craters road was accomplished with park labor. Several places along Kilauea rim road were also repaired with oil and gravel during the month.

Thirty trail direction signs were painted and installed during the month.

An inspection of all park buildings was held by Mr. Wingate, Mr. Moomaw, Mr. Higashida and myself to estimate future maintenance costs.

230 - Special Improvement Activities

A CCC project to realign the Hilina Pali trail was started during the month. A spike camp was installed at Hilina Pali shelter to house this gang until the job is completed.
410 - Lecture and Guide Service

The ranger division continued to conduct tours, hikes and other contacts during the month.

610 - Ranger Service

Extensive patrols were made into all outlying districts both on foot and by horseback. Patrols were made to Mauna Loa summit, Kalapana and Agua Point as well as to Kanoa and Great Crack area.

620 - Police Protection

Several persons were apprehended for infractions of park rules and their cases properly disposed of. Excellent cooperation by Kilauea Military Camp officers was received in this respect.

Several patrols were made of the CCC camp late at night. All was found in order on these inspections and the night watchmen were on duty.

640 - Forest Fire Protection

Two fire suppression talks were made at safety meetings at the CCC camp.

650 - Building Fire Protection

The quarterly fire inspection was held during the month. All operator's, park and CCC premises were checked for fire hazards and corrections made wherever needed. One fire drill was held at the CCC camp.

660 - Accidents

One minor accident involving a CCC truck and a private car occurred during the month.

690 - Public Health

Sanitation inspection of CCC and Volcano House was made at the time of the fire inspection.

900 - Miscellaneous

Ten wild goats were destroyed during the month.

[Signature]
Joseph H. Christ
Chief Ranger
MEMORANDUM TO THE SUPERINTENDENT THRU THE CHIEF RANGER:

Subject: Monthly narrative report for July.

Routine flag, switchboard, and patrol duties were carried on during the month.

The major part of my work for the month has been spent on the Park telephone system, assisting Foreman Maka in the installation of the new cable system and the maintenance of outside lines. The trouble in line #10 has been discovered and repaired. New insulators have been installed on this line, replacing those broken in the section between Kilauea Military Camp and Hanamakini Paio.

Some work has been accomplished in the erection of new trail and road signs as a total of 16 has been installed during the month.

On July 17, I discovered the name, James Dickens, written on one of our new signs in the Bird Park area. This information was reported to Chief Ranger Christ and Assist. to the Supt. Moomaw for action. On July 19, I assisted Rangers Winter and Schulz in the apprehension of two soldiers, Privates Price and Ruscel, who had a supply of Haio wood in their possession.

On July 20 to 22, incl., I made a trip to the summit of Mauna Kea accompanied by Miss Kendall, local YWCA assist. sec., and Miss Louise Ewing of the Honolulu YWCA staff.

Comments: I feel that we should take steps to improve the appearance of the rubbish containers now in use at Halemaumau, Kipuka Puaulu, Hanamakini Paio, etc.

Signed:

Arthur L. Jess
Park Ranger.
MEMORANDUM FOR THE SUPERINTENDENT:
THROUGH THE CHIEF RANGER.
SUBJECT: RANGER'S REPORT OF JULY, 1939.

A list of principal activities for the month follows:

July 1 and 2. At Aupa Point, while there the stone walls of the shelter were demolished and rebuilt so that these walls are now strong and no danger exists from stones falling on sleepers at night. A good corrugated iron roof and a floor, 1 foot above the ground, were also installed. This shelter will now easily accommodate 8 persons under its roof.

July 4. Manuikii Society meeting and hike on the slopes of Mauna Loa. The following birds were pointed out to this group: Lintet, Elepaio, Apapana, Amakihi, Iiwi, Mina, Turtle Dove, Quail, Pheasant and Skylark; several nests were also shown to the group.

Six full days were spent on laying-out, supervising the painting of and setting trail directional signs.

Public contacts for the month included:
2 Mauna Loa Truck Trail Tours; 35 persons in 7 cars.
Kipuka Puaulu Nature Walk; 4 persons in one car.
General Park Tour; 56 persons in 5 cars.

One circle patrol by horseback was made of the Crater Rim Trail with Mr. Fagerlund and Mr. Medeiros.

One 5-day trip was made to the summit of Mauna Loa with Dr. Ballard and Mr. Cunningham. A detailed report was submitted covering this trip.

The two Mauna Loa Fire Caches were checked on July 28th and recommendations were made to the Chief Ranger concerning same.

On July 31 a hike was made from Makaopuhi to Kalapana, supervising 16 CCC boys in clearing the Kalapana Trail.

The supervising of CCC boys on exotic removal has necessarily been neglected this month due to press of other duties. They are, however, getting along satisfactorily and making good progress in Kipuka Puaulu.

Respectfully submitted,

Gunder E. Olson, Ranger.
TO THE SUPERINTENDENT
THROUGH THE CHIEF RANGER
SUBJECT: MONTHLY REPORT FOR JULY, 1939

My duties for the month have consisted chiefly of routine work at the Observatory with some special activities from time to time. In general the routine includes reading the various weather instruments each morning, changing the seismograph drums at the Observatory and preparing the records for study. In addition the seismograph drums at the Uwekahuna and Pit stations are changed each morning, the tilt read at the two tilt stations, and the Pit and Uwekahuna records are prepared and the drums smoked for use the following day. On alternate days the drum on the Mauna Loa seismograph is changed. A weekly weather report is sent in every Sunday and at the end of the month a detailed summary is prepared for the Weather Bureau in Honolulu. On Fridays a series of cracks around Halemaumau and in the Chain of Craters area are measured and results tabulated. When the daily routine is finished the remaining time is spent keeping up various charts such as the seismicity chart, tilt graphs, etc.

Following is a more or less detailed summary of the months activities:

On July 1st I finished spotting the June 1939 earthquakes on the reference map, completed a tabulation of the 1938 earthquakes, and prepared the Monthly Weather Report. On July 2, 3, 4, 5, and 6 I changed the drums on all the seismographs, prepared the records for study, and smoked the drums for use the next day. During this period I also worked on a chart showing the distribution of earthquakes during 1937 and 1938 according to the hour and day of week. On July 6 I brought the crack measurement chart up to date. On July 7 I assisted Ranger Schulz in the routine field work on the seismographs and also assisted in the weekly crack measurements. I prepared the Pit and Uwekahuna drums and worked with Mrs. Weasche on the location of a number of earthquakes.

On July 8 I accompanied Ranger Shaver on the regular Army Park Tour. In the afternoon I cleaned and refilled the alcohol-shellac container and prepared the Mauna Loa drum. On July 9 I worked on a chart showing the distribution of the 1937 earthquakes and prepared the Uwekahuna drum. On July 10, 11, 12, and 13 I changed the drums on all the seismographs, prepared the records for study and smoked the drums for use the following day. During this period I plotted the time correction curve and made the necessary time adjustments in the earthquake record book.

On July 14, at 5:00 a.m., in company with Rangers Hinter, Cunningham, and Baldwin I left for Hálina Pali. Ranger Baldwin and I hiked from the rim of the Pali to the sea coast and back.

On July 16 and 17 I changed the drums on the seismographs and prepared
the records. I was off duty the afternoon of July 16th. On July 17th I
worked on a graph showing distribution of earthquakes according to hour of
occurrence. I also arranged for food for the projected trip to the summit
of Mauna Loa. I was off duty the afternoon of July 17th.

On July 18, at 8:30 a.m., in company with Rangers Olson and Cunningham,
I left for the summit of Mauna Loa. The first night was spent at the
Halfway house, the next two nights at the summit shelter house, the fourth
night back to Halfway house and at 1:30 p.m. on the afternoon of the fifth
day we arrived back at Park headquarters. While on the summit the 1935
lava flow on the floor of Mokawainu was mapped. A detailed report of this
trip has already been submitted.

On July 23, 24, 25, 26, and 27 I changed the drums on the seismographs (Mr.
Waesche changed the Pit and Uewahuna on July 23) and assisted Mr. Waesche
in reading the daily earthquake records and in preparing the Weekly Report.
I was off duty the afternoon of July 23.

On July 28 I serviced the seismographs and assisted Mr. Waesche in
measuring cracks. I tabulated the crack measurements and worked on a
compilation of the rainfall at the Pit station. On July 29 I read the
daily seismograms, finished tabulation of the Pit rainfall for the past
6 years, and helped Mr. Waesche with his paper on time control of the
seismographs.

On July 30 I measured angles on fixed points on the crater floor with
a transit, serviced the seismographs and drafted the circuit diagrams for
Mr. Waesche's time control paper. On July 31 I prepared the Weekly
Report and also the Weekly earthquake summary and continued work on the
circuit diagrams.

In Mr. Waesche's absence (July 29 and 31) I have read the daily
seismograms and kept the various charts showing seismicity, tilt, etc. up
to date.

Respectfully submitted

[Signature]
Fred M. Bullard
Seasonal Ranger
Memorandum for the Superintendent.
Subject: Monthly Narrative Report.
Through: Chief Ranger

August 1, 1939

The first two weeks during the month of July were spent in sign painting.

Two trips were made to Hiliina Pali where 50 feet of Black & White movies and some color slides were taken. One dozen Black & White shots were made of the different lava formations. Two goats were shot and killed.

One trip was made to the summit of Mauna Loa with Rangers Olson and Ballard. A photographic record was made of the entire trip.

Several days were spent in placing signs about the park trails.

Several miscellaneous pictures were taken of the Park on Black & White film.

Approximately 50 feet of color movies were taken of different scenes along the Chain of Craters road.

James E. Cunningham,
Temporary Park Ranger.
MEMORANDUM FOR THE SUPERINTENDENT
(Through Chief Ranger)

SUBJECT: Park Warden's Daily Report for May, 1939
A. B. Mederios

May 1--Working in office studying rules and regulations of park area, also studying about telephone lines and telephones and their locations.

May 2--Accompanied Ranger Jess to inspect telephone lines and telephones through the districts of Kau and Mauna Loa, checked fire caches--Mauna Loa section. Inspected telephone line #10-Park Office covering Makapuu. Posted new signs at Napau truck trail. Checked saddle room, fed the horses at Bird Park, brought two saddles from Bird Park's saddle room to Headquarters for repairing. Cleared one fallen tree limb lying across Mauna Loa truck trail.

May 3--Accompanied Chief Ranger Christ and Ranger Olson, took trail to Napua Crater, then through new trail to inspect lava trees. New location worked around Bird Park corral. Cleaned saddle room. Checked all riding equipment. Repaired corral fence.

May 4--At Bird Park-checked all riding equipment, repaired strap on one saddle and repaired two bridles. Repaired Bird Park corral fence. Drove horses in corral and fed them. Drained and cleaned water trough.

May 5--At Bird Park corral, Drove horses into saddle room corral and shod three horses--repaired one pack saddle.

May 6--Telephone line inspection on #8 line. Trimmed a few tree limbs. Discovered a twisted wire and untwisted it. Fed horses at Bird Park corral. Built locker for shoeing equipment.

May 8--Assisted Ranger Jess-Drove down to Hilina pali and brought two horses to Bird Park corral.

May 9--Directed traffic at Lava Tube parking area, due to the visitors of the S. S. Franconia. Painted signs at paint shop.


May 11-Pruning tree limbs along side Prof. Jagger's house. Marked parking stall on parking area at Volcano House. Worked around saddle room corral.

May 12-Assisted Ranger Jess--Inspected telephone lines on line #8.
Repaired telephone line on cottage #15. Drove to Kalapana to pick up Ranger Olson and Shulze-Ranger's Olson and Shulze took the Puna-Volcano trail hike.

May 13--Checked on telephone line #8. Installed two nail hobs on cottage #15 and braced telephone wire between cottage #15 and #16.

May 15--At Bird Park corral shoeing horses and preparing pack train equipment for Mauna Loa trip.

May 16--17-18-Accompanied Ranger Olson; inspection trip to the summit of Mauna Loa-Checked and cleaned Puu Ulaula rest house at 10,000 foot elevation. Checked and cleaned Hān O' Pele rest house at the summit. Also patrolled and checked boundary fence line at O-Hikea-Kapapala section.

May 19--At Bird Park corral - shoeing horses and repaired one saddle.

May 20--Shoeing horses and drying blankets.

May 22--At Bird Park corral--Drove horses in and shod two horses.

May 23--At Bird Park corral shoeing horses.

May 24--Painting parking stalls on parking Area at Volcano House.

May 25--Painting stalls on parking Area at Volcano House.

May 26--Working around saddle room at Bird Park and Painting parking stalls at Volcano Parking Area.

May 27--On forest inspection at fire Kipuka with Ranger Christ.

May 29--Worked around Bird Park corral and preparing riding equipment for incampment.

May 31-- Took horses to Hilina pali and camped.
MEMORANDUM FOR THE SUPERINTENDENT
(Through Chief Ranger)

SUBJECT: Park Warden's Daily Report for June, 1939
        A. B. Mederios

June 1--Patrolled shore line and inspected Halapei shelter. Killed three goats.
June 2--Patrolled around Kipuka Pepeau and shot five goats.
June 3--Patrolled around Hilina pali section and shot two goats.
June 5--Patrolled around Hilina. Shot one goat and built food locker.
June 6--Patrolled around Hilina and killed one goat.
June 7--Patrolled along the shore line at Kalua section.
June 8--Inspection tour along fence from Kamooali section to halfway house. A few sections of the fence was discovered broken down, and a report was made to Chief Ranger Christ and I suggested that this should be repaired immediately because this would make an easy passage for goats coming into park area. Shot three goats.
June 9--Went to halfway house and brought horses back to Bird Park corral.
June 10--Accompanied Ranger Minter to check telephone line at Halemaumau section.
June 12--At Bird Park corral preparing horse shoes and riding equipment for Apua trip.
June 13--Took horses to Hilina.
June 14--Patrolled around Hilina and Pepeau section.
June 17--Took horses from Hilina to Bird Park.
June 19--Shoed horses at Bird Park corral.
June 20--Repairing pack saddles and drying blankets at Bird Park saddle room.
June 21--Hunting pigs at Bird Park. Caught one large boar.
June 22--At carpenter shop building pack saddle box and locker for Apua shelter.
June 23--At Bird Park saddle room preparing equipment for Apua trip.
and repairing saddle room corral fence.

June 24—Day off.

June 26—Worked around Bird Park corral and shoeing horses.

June 27—Took horses to 6,500 elevation—Mauna Loa.

June 28—Went to 6,500 elevation—Mauna Loa—to help Ranger Jess with pack train.

June 29—At saddle room corral shoeing horses and hauled material to Nene for Apua shelter.

June 30—Patrolling from Bird Park covering Uwekahuna—Puu O Hale Nene and Apua.
MEMORANDUM FOR THE SUPERINTENDENT
(Through Chief Ranger)

A. B. Mederios

July 1--Patrolling around Apua and building shelter.

July 2--Patrolling from Apua and covering Nene.

July 3--Patrolling around Hilina--Shot one goat.

July 4--Patrolling around Hilina and Pepeau. Shot two goats.

July 5--Patrolling around Hilina, covering Puu O Hale, Kau Desert and Uwekahuna.

July 6--Working around saddle room corral.

July 8--Day Off.

July 10--Trip to 6,500 elevation-Mauna Loa and took three horses.

July 11--Trip to 10,000 elevation-Mauna Loa and took fuel and horse feed. Patrolled and inspected fence line from end of Mauna Loa truck trail through O-Hiikea section and back to Bird Park.

July 12--Shoeing horses at saddle room corral.

July 13--At saddle room corral shoeing horses.

July 14--Horse back ride with ranger Olson and Fageland. From Bird Park-Uwekahuna-around crater rim past Keanakakoi-to old Keahou road and back to Bird Park.

July 15--Inspection and repairing telephone line #11 from Chain of Crater road entrance to end of Anahou ranch.

July 17--Saddle room preparing riding equipment and horse feed for Mauna Loa trip. Took five horses to 6,500 elevation-Mauna Loa.

July 18--To 6,500 elevation-Mauna Loa to help Ranger Olson with pack train. Repairing telephone line #11 at Keauhou Ranch section.

July 19--Took horses to 6,500 elevation-Mauna Loa at A.M. At P. M. took horse feed and riding equipment.

July 20--Trip to 6,500 to help Ranger Jess with pack train--repairing telephone line #8 and trimming tree limbs.

July 21--Trip to 6,500-Mauna Loa to bring horses back to Bird Park.
July 22-To 6,500 elevation Mauna Loa to bring horses back to Bird Park.

July 24-Working around horse corral and shoeing horses.

July 25-Clearing on Kalapana—Volcano Trail.

July 26-At horse corral preparing horses and riding equipment for Mauna Loa and Hikina.

July 27-Patrolling from Bird Park to Hikina covering Puu O-Hale and Nene.

July 28-Patrolling along Kalue and Kamooali shore line—Shot two goats.

July 29-Patrolling from Hikina to Apua covering Halape. Shot one goat.

July 30-Patrolling from Apua covering Kahue and return.

July 31-Patrolling from Apua to Hikina covering Kauhani. Shot one goat.
Memorandum to the Superintendent,
Thru the Chief Ranger.

Narrative report for the month of August, 1939.

Two scheduled trips were made to the summit of Mauna Loa, and a detailed report on the first one made July 6th, 7th, and 8th was submitted at the time. The second trip, to pack feed and kerosene for use by future trips was made on July 27th and 28th, accompanied by Lieut.-Commander J.W. Kellihier, Executive Officer of the U.S. Coast Guard Cutter Taney. The rest houses were found and left in good shape for the next occupants.

On July 14th, at 3:51:32 AM a four bell quake was registered at this point, and all seismographs in the crater area were readjusted by myself, before leaving at 5:00 AM with Rangers Cunningham, Bullard and Baldwin for the Kilauea Pali area on a photographic and general exploring trip. Four goats were destroyed on this trip.

Total of two days were spent on switch board duty, during which some inventory work and some typing for the Chief Ranger was accomplished.

Five days were spent "off duty" during the month.

Four days were spent in the Observatory shop, making and designing a new type driver for Beach seismo drums; rewiring the phantom circuit at the Museum so it is practically invisible; dismantling and rethreading drum shaft for the pit seismo; making new idler for the "jewelry shop" drill press; dismantling and starting the rebuilding of the "four bell" shock recorder in the Obs. basement.

Six and one-half days were spent on paper work in regards the Obs. inventory, and while much has been accomplished, the completion of the task is very indefinite. The records of the various Government agencies before the Park Service have been searched and all items thereon noted, transcription in pencil, in alphabetical order has just been finished. There is a myriad of other item whose ownership is doubtful that will have to be listed and ownership decided before a list can be made with any degree of accuracy.

Was on duty with Ranger Shaver on the evening of July 15th.
On July 19th, at noon, it was reported to me by one of the members of the permanent detachment at the Military Camp, that two of the visitors were avowedly going after Naio wood in Kipuka Panula. I reported to Asst to the Capt' Moomaw and went to try to apprehend them. Was just behind them when Rangers Jess and Schulz, sent by Mr. Moomaw to my assistance, as witnesses if necessary, met them on the new golf course road and took them into custody. We proceeded to the Military camp where the two men, Privates Earl Price and Charles Russell were placed under arrest by Captain Harris, and three days labor, curtailment of leave, and letter to their company commanders at Schofield forwarded, and further company punishment by their respective commanders was the punishment received for the offense.

On July 19th, at 11:00 PM I made the scheduled nite patrol of the local CCC Camp and found the night watchman alert and on the job, and everything quiet.

Four days were spent on routine patrol duty during which time the routine observatory work in the field was carried on, assisting Mr. Wascha during the absence of Dr. Ballard on Mauna Loa.

Respectfully submitted,

[Signature]

John E. Minter,
Park Ranger.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII
July 31, 1939

MEMORANDUM TO SUPERINTENDENT WINGATE
THROUGH CHIEF RANGER CHRIST.


Most of the month was taken up with working up the bird project report. The major part of the report was completed, and fifty-five pages were made ready for the typist. Other activities included field trips or patrol to Mauna Loa with the Manuiki Society, to 3-trees Kipuka with Ranger Schulz, to Kipuka Nene with Ranger Shaver, to the seashore below Hilina Pali with Ranger Ballard, and to Kalapana from the Chain of Craters with Chief Ranger Christ and Assistant Superintendent Moomaw. Guests were escorted through the park on July 25. The switchboard was manned a number of times. Lanterns were set out at the lava tube twice.

Large caterpillars infesting the Evening Primrose were reared out in a warm temperature room. They were found to be the larvae of Sphinx moths.

July 31, 1939

Respectfully submitted,

Paul H. Baldwin
Temporary Ranger
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
July 31, 1939

MEMORANDUM FOR SUPERINTENDENT
THROUGH CHIEF RANGER CHRIST:

SUBJECT: Ranger Report for the Month of July

(Duties Performed:

Regular turn was taken as custodian of the flag.

Assisted in guiding trips (six to 117 visitors) and giving lectures (ten to ).

A total of one day per week was spent on duty at the Volcano Observatory.

One press release, the Ranger Report for the month of June, and a letter to the Wildlife Division were issued.

Five days were spent on Park inventory prior to July 15, 1939. No further work has been done on this project pending decisions on a memorandum for the Superintendent dated June 30.

An aggregate of approximately two days was spent between July 5 and July 18 involving four trips to Three Trees Kipuka taking nene habitat photographs for the Wildlife Division.

On July 18 acted on the Board of Survey condemning and witnessing the destruction of CCC clothing, etc. Also checked on a fire at the garbage pit at Kaenakean, and with Ranger Jess apprehended two soldiers: E.A. Price and C.D. Russell for taking down nene wool.

July 19 and 20 were spent on regular quarterly fire and sanitation inspection with assistance of Rangers Shaver and Jess. On the following day wrote up and typed Fire and Sanitation Report.

July 20 Investigated Kalamaki and Lava Tube systems and worked on sketch for the Lava Tube shrine. Checked same with Dr. T.A. Jagger and Assistant Geologist Mason.

July 25 Corrected with Ranger Shaver some defects found in the fire and sanitation inspection.

July 29-30 on "dance duty" with Ranger Paul Baldwin from 10PM to 8AM.

Patrolling with car was done as scheduled and the following trails were traversed either on guided trips or as straight patrol trips: Crater Rim Trail to Thurston Lava Tube, Giant Koa, Kipuka Puaulu, Bryan Ledge Trail from Summer Camp, and Mauna Loa from 6700 to 10,000 foot elevations, also Pau Huluhulu.

Comments:

1. We would appreciate clearance as to whether or not traffic whistles will be made available to rangers on memorandum receipt, so that we may provide ourselves with whistles in the event that they cannot be provided.)
2. It has noted that the saddle room at Puu Puu is in an improved condition and fittings seem well taken of.

3. The piece of dirt road from the shelter at the end of the Mauna Loa Truck Trail to the stable and corral is in extremely bad condition. It is necessary to use this road when bulky supplies are to be taken up the mountain. It is felt that this is a potential cause for repair on park cars, and that the condition can be alleviated with a few man days of work.

4. The swampy spots in the Crater Rim Trail in the direction of the Lava Tube were sources of adverse comment by a small hiking group. Since it is primarily a bridle trail and since crushed rock is not nearby available, the correction of this may be considered impracticable.

5. The semi-permanent pipe guard railing around the relief maps in the office lobby and at Uwakahuna Museum afford adequate protection but is unfortunate that the one in the museum was emplaced with the map in an unoriented position.

6. The undersigned has received unfavorable comment on the conspicuous "Made in Japan" sign on the seismic instrument. It was suggested that at least the label be covered over or removed. This is merely the insistent suggestion of the visitor, and not that of the undersigned, nor does it express his feelings on the subject.

7. The CCC has blocked the short cut on the Kilauea Iki trail nicely, but repair of the step is not as good as could be desired.

8. The Lava Tube Men's Lavatory is still entirely without toilet seats. Now the pieces have also disappeared so that repair with cleating is impossible.

Days Off:

Five "days off" were taken as follows: July 2, 16, 27, 28.

Natural Phenomena:

Rain gage readings at the end of the Mauna Loa Truck Trail at 6700 feet elevation were as follows: July 1 .04, July 7 .35, July 9 .24, July 13 .01, July 17 .06

On the Mauna Loa Truck Trail California Quail were frequently seen: 7/1 ten pair and one single bird also one pair with a owry of five young; on 7/9 five adults in flock and one pair; 7/11 one pair; 7/13 two pair; 7/17 one pair with one more than half grown young; 7/30 one pair and one individual.

With the Mauna Uki under Rangers Baldwin and Olson on July 4 the following birds were seen at Puu Puu, Giant Koa, and along the Truck Trail: Hawi, Amapana, Turtle Dove, Mynah, Rice Bird, Linnet, English Sparrow, Skylark, Pheasant, Quail, Elepaio, Amakso, Pekin Nightingale.

July 7 at 3PM at the end of the Mauna Loa Truck Trail five nene were seen flying in the rain at about 400 or 500 feet in a flat "V" formation which disappeared into a low cloud after describing an arc. The geese were calling as they flew in a rather low pitch.
Memorandum to the Superintendent:
Subject: Monthly Narrative for July
Through Office of Chief Ranger Christ.

Duties Performed: Park duties this month have consisted of the usual type of work performed by the ranger staff. Two and one half days were spent in the office as switch board operator, combined with some public contact in giving information to park visitors.

Routine patrol was my assignment from July 2 to July 8. At this time, the park roads were checked daily for safety, for miscellaneous infractions of park regulations in regard to speeding, care of property and due consideration for flora and fauna. Daily check was made of facilities provided for the use and convenience of park visitors. Several trips were made up the Mauna Loa Truck Trail for transportation of park rangers and supplies needed for stock on Mauna Loa summit trips. Two trips were made to Hilo for freight and mail.

Public contacts have included two all day hikes, two KMC general park tours, one half day hike, and one Mauna Loa auto tour. Details of persons contacted are given in report to park naturalist, Gunner Fagerlund.

Ranger Baldwin and I spent one day at Kipuka Nene, studying birds.

Seven and one half days were spent painting signs and setting up the same, assisted the major portion of the time by Rangers Olson and Jess. I assisted Ranger Jess two days on telephone maintenance.

On July 20 and 24th, Ranger Schulz and I completed fire inspection of park buildings and the hotel. Details are given in July Report of Fire Inspection.

Ranger Minter and I were on dance duty July 14.
I have continued the study of plants and animals; also, the history of Hawaii National Park, using the reports from the Observatory and the books available here in the office.

Comments: The daily schedule, provided in advance for each ranger by Chief Ranger Christ, has been an efficient plan in rendering service to the public.

The increase in number of park visitors for July has been noticeable.

The erection of new signs has caused an increase in use of trails.

The bi-weekly clean up patrol has added to the appearance of the park.

Natural Phenomena: Number of goats have been seen up Mauna Loa and at Hila Ma Pali.

Quail seem to be quite abundant by the Mauna Loa Truck Trail and at Kipuka Nene.

Readings of temperatures are being continued at the "hot spot" near Puhimau. There seems to be no heat in the soil at Pauahi; therefore, the death of Ohio Lehua in this region is not caused by heat. No increase in temperature is noted near Puhimau, while some higher temperatures have been noted in other steam vents. A record of readings is as follows:

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Recommendations:

1. A metal drum for horse feed to keep rats from eating grain while stored.

2. A waste container for old cans at Kipuka Nene and at Summit House.

Ralph K. Shaver, Seasonal Park Ranger.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FILE NO.

MONTHLY REPORT
JUNE 1939

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.

ARNO B. CAMMERER,
Director.
MEMORANDUM FOR THE DIRECTOR:

There follows the report of activities for Hawaii National Park during June.

OOO - General

On June 13 a United Press dispatch in the local newspaper stated that the examiner for the US Maritime Commission had presented this report to the Commission recommending that the present Inter-Island rate structure be approved. The examiner thus reversed the recommendations of the Commission's attorneys. The examiner's report did not press the issue of the Inter-Island's property valuation which the company contended should be based on reproduction value rather than "reasonable investment" as argued by the Commission's attorneys. Copies of the examiner's report were received in this office on June 23, together with a notice that exceptions to the proposed report would have to be filed before July 22.

Following a confidential radiogram to your office, Land Commissioner Whitehouse requested the superintendent to cooperate with him in a study to determine if a new hotel in Hilo would adversely affect the operation of the Kilauea Volcano House in the national park. A detailed reply was made. Later in the month Commissioner Whitehouse announced his decision to oppose the sale of the government land formerly occupied by the Hilo Yacht Club to Senator W.H. Hill and associates, who, it is rumored, had purchased the lease of the Yacht Club site at public auction about a year ago. Copies of the detailed report to Commissioner Whitehouse were forwarded your office.

OOO - General Weather Conditions

Total precipitation at headquarters was 6.65" and at Haleakala 1.47". In spite of such a small total of rainfall at Haleakala there were only 3 entirely clear days reported for the month, with 5 cloudy days and the remainder reported as partly cloudy. Maximum wind velocity at headquarters was 16 mph on the 8th and 15th. Maximum and minimum temperatures were as follows: Haleakala 79 and 45 degrees; Kilauea 72.3 and 49.6 degrees. The ranger in charge of the Haleakala section reports that precipitation lost at the rain can near Puu Hiamu was greater than the precipitation. A can to measure evaporation has been installed by the side of the can at elev. 7,450 near Haleakula. Indications are that evaporation will be found to be high. At the proposed intake rainfall was 1.5". Patches of snow were still to be observed on Mauna Kea (Hawaii) at the end of the month.
Administrative

Superintendent's Special Activities

The superintendent spent the entire month at headquarters, working on the final estimates, making routine inspections of regular park and CCC projects and attended a luau at board the USS Nevada, June 26. He was accompanied by Mrs. Wingate, Asst. to the Superintendent and Mrs. Moomaw, and Clerk-stenographer Whitney. Guests at this dinner were also the superintendent and attended a luau given by the Hawaiian Civic Club on June 3.

General Publicity

On June 20, the Hilo Tribune-Herald made pleasing editorial comment on connection with the employment of our seasonal rangers, and the transfer of Onder C. Ferguson to the position of assistant park naturalist.

Maintenance, New Construction and Improvements

Acting Ranger in Charge of the Haleakula section reports that %imported, vigorous, creeping grass (kunui) is attacking the pavement of the Haleakula road in 2 spots. Various methods of removing it without damage to the pavement are being tried. Digging it out proved too damaging. Killing it with a blow torch and by drenching with creosote are now being tried, each method giving promise of success. The cheaper method will be adopted.

Special Improvement Activities

The camp director reports that during June 10 new boys were enrolled and 11 discharged - 4 dishonorable, 3 for end of enrollment and 3 for securing permanent employment. There was a total of 598 man days lost due to sickness. Five enrollees were operated upon for appendicitis and these with some of the operations in May caused a loss of 141 man days. There were 6 minor accidents with a loss of 17 man days. There was a loss of 120 man days from all other causes. The project superintendent reported a daily average of 160 enrollees released to him on the 22 working days, a total of 3513 man days worked.

Two safety and recreational meetings were held. Joseph Akau of Hilo, Deputy US Commissioner, attended the meeting on June 26, and gave a very inspiring talk to the boys.

Mr. David W.L. Forbes, CCC Recreational Supervisor for the Territory, made a short visit to the camp during the month.

Work was carried on on the following projects: B-3 Boundary trail, 100% complete; U-3 Underground telephone system, 75% complete; last 2 employees' cottages at Kilima, job 308, 85% and 90% complete respectively; M-9 tennis court and minor road improvement 50% complete; Park boundary
which runs through the local golf course was fenced by the CCC; and the secondary road to Kipuka Paaulu (Bird Park) realigned and placed entirely on park land.

Camp Director Huston was elected president of the Big Island Athletic Union for the 1939-40 year. Baseball was the principal recreational activity during the month.

On the 17th, 2 enrollees were charged with petty larceny of government property, chiefly bedding. They were brought before the US Commissioner in Hilo and as the property was recovered the case was dismissed and the boys discharged from camp.

CCC estimates for the 1940 fiscal year were mailed on the 25th.

At Haleakala the foreman for the sub-camp there reports 321 man days worked on 21 working days, with 37 sick and conditioning days lost. Two safety meetings were held. Recreational Supervisor Forbes visited the camp June 14 and 15. The employees' cottage, CCC job 508, was 85% completed; and work has started in hauling material for the water system. The trail crew roughed out a service trail 1500 feet long, leading from the rim of the crater near Pakaa to down inside the wall along the base of a cliff on which a number of silverswords may be seen. This trail puts some fine specimens in view within 10 minutes' walk from a car. The diesel oil-burning range has been installed in the kitchen and is giving good service.

300 - Activities of Other Agencies in the Park

310 - Park Operators

On June 3 a dinner dance was held at the Volcano House by the Hilo High School alumni, with about 500 persons in attendance. The regular monthly dance was held on the 17th.

320 - Cooperating Governmental Agencies

The first aid class, conducted by Captain J.K. Cullen of Kilauea Military Camp, finished its course and received certificates. Those who had taken the advanced course previously, but had not received certificates, received them for this course at the same time.

330 - Donations or Accessions

A splendid unbroken and finished stone adz was found near Waikapu. Spring in Keupo Gap (Haleakala) and, together with a sliver stone and some partly finished adz blanks from ancient sleeping shelters near Kawailahaino, in Haleakala, were added to the museum collection. At Kilauea Ranger Olson found an inamoa or kuuki kernel pounder at Ana Point, which was turned over to the naturalist division. In view of the continued rifling of the known areas where Hawaiian artifacts are found, unless the locality is
inaccessible or otherwise generally unknown, any such materials found are gathered and added to the museum collections, with notes as to precise locality, etc.

420 - Interpretation

410 - Lecture and Guide Service

Gunder O. Fagerlund, who was transferred from Colonial National Historical Park, Virginia, entered on duty June 3 as assistant park naturalist. Most of his time during the month was utilized in familiarizing himself with the park and informational and interpretational activities. The regular program, therefore, was carried on by Ranger Schula with the assistance of other members of the ranger division.

420 - Museum Activities

Cataloging of geological specimens at Uwakahuna museum were completed. Dr. Jagger checked all exhibits and corrections and additions were made to the labels. A collection of 20 common Hawaiian woods was added to the exhibits.

430 - Research and Observation

431 - Botany: At Haleakala bud stalks are beginning to develop on a number of silverweed in the crater. Two healthy plants were found growing on the pali of Kalepelao; these become the outpost plants in Koalau toward Keanae, as none had been found prior to this below the Halemau crater in Koalau Gap.

At Kilaeua one papala tree, 2 feet in diameter, was found at Kipuka Paulu and 4 additional opuhe trees, in addition to those previously known. Many koa seedlings about 8" in height are now seen in the cattle-grazed section of the park in the vicinity of Six Tanks. The exclusion of cattle from this section for the past 7 months or so has allowed these to come up quite plentifully.

432 - Zoology: Seasonal Ranger Paul Baldwin completed a 12 page preliminary report on bird studies which he had conducted the previous summer while employed as CCC senior wildlife foreman. While on a hike through Kipuka Paulu 2 Japanese hill robins were collected which turned out to be carrying a bacterial disease when dissected. They were sent next day to the laboratory of the Board of Agriculture and Forestry in Honolulu for study. On June 28 Ranger Schula reported a large number of linnets at Kipuka Paulu in a loose flock. On the 27th he also reported seeing 8 kosa (crater birds) at Puu Koa and the adjacent craters. Twelve pair of Japanese pheasants were noted by Ranger Olson to be apparently nesting in the Giant Koa area, 2 linnet nests were found near Giant Koa "Jr." and one oven was noted at the lava tube parking area on the 9th. The Chinese and Mongolian pheasants which were plentiful in the park 2 years ago are now hardly ever seen. This is strange as the Japanese pheasant shows definite signs
of increase in spite of the certain mongoose depredations. Perhaps the war in the Orient is being carried on even among the different species of pheasants.

433 - Geology: The month of June was notable for a very pronounced seismic spell just before the solstice, which had begun in May. The peak was reached May 31 with 3 strongish shocks about Kilauea and Kilauea. The maximum of all activities was the second week of June; seismic intensity, however, was highest at the end of May. A strongish shock occurred June 12 and another on the 19th, both apparently fairly deep under Kilauea; a singular shock, June 24, was like a blast, of shallow origin under the northeast rim of Kilauea. Opening of cracks along the Chain-of-Craters was greatest for week ending June 11. Distant quakes were recorded June 1, 8 and 11.

Throughout the month Dr. Jaggar was engaged in preparing a manuscript for publication, and its illustrations, on "Volcanic Gases." Some results that may prove of importance in this investigation are to the effect that carbonic acid gas and hydrogen, reacting with each other, produced the water vapor and carbon monoxide collected in the numerous vacua tubes.

The Board of Directors of the Research Association, and also the regents of the University of Hawaii met during the month and confirmed the project outlined by Dr. Jaggar for his increasing use for purposes of publication. S. Sato was appointed full time assistant under the University and H. Yasumaka half-time under the Research Association from July 1. Dr. Stanley S. Ballard of the University of Hawaii, Research Associate in Geophysics, was in the park June 26 to 28th, to overhaul equipment and make plans for chemical collection and the spectrographic program.

An important letter was received from Dr. F.B. Jewett Vice President in Charge of the Experimental Laboratory of the American Telephone & Telegraph Company, New York, by Dr. Jaggar. Dr. Jewett is the leading experimental physicist of the United States on sound communication and President of the National Academy of Science. This letter, stimulated by a visit of Mr. J.G. Mculloch also of the company, was whether it would be possible, using existing telephone wires and wireless to have seismographs, as nothing more than pendulums in underground chambers, do all their recording at the Observatory. Dr. Jaggar has sent Dr. Jewett a map and statement on this subject. The registration of local quakes all at one central set of drums with uniform time service, would be not only a remarkable achievement in seismology but of importance to the population of the island in making more precise our predictions of the place of coming eruptions.

500 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

There was a total of 25,360 visitors to Kilauea as compared with 15,491 for 1938; and at Haleakala the ranger in charge reports 1,745 as compared
with 1,465 for June 1938. This increase was largely due to the fact that during the same month last year Inter-Island steamers were tied up by the seamen's strike.

520 - Visitors

June 13- Mr. Lorrin P. Thurston, President of the Honolulu Advertiser, accompanied by Mr. F.H. Bartholomew, Vice President of the United Press, in charge of the Pacific and Oriental divisions. They were overnight visitors, and were given special attention by the superintendent.

June 16- Mr. Bartholomew again returned, this time in company with Senator and Mrs. J.H. Farrington of Honolulu. Mr. Farrington is president of the Honolulu Star-Bulletin, and a member of the territorial senate.

June 29- Professor and Mrs. James T. Norris. Dr. Norris is Director of Chemical Research and Professor of Organic Chemistry, at Massachusetts of Technology.

Other parties included some 400 ROTC cadets, officers and men from the USS Nevada, 2 local school groups and a group from the USS Dolphin.

600 - Protection

610 - Ranger Service

Dr. Fred W. Ballard, geologist and petrographer of the University of Texas; and Ralph K. Shaver of North Carolina, entered on duty as seasonal rangers on the 16th. This is Dr. Ballard's first appointment, and Mr. Shaver's second season in Hawaii. Paul H. Baldwin, of the University of Hawaii, entered on duty on the 17th. This is also his second summer in the park, having served as CCC wildlife foreman last year.

620 - Police Protection

An investigation was made by the ranger division of a theft of money from one of the boys at the CCC camp, but to date the culprit has not been located, though a few enrollees are under suspicion and the police authorities have been requested to cooperate in Hilo.

630 - Wildlife Protection

Eighteen goats and 1 wild pig were destroyed at Kiluaea and 31 goats at Aleakula. Ranger Olson reported 5 wild burros at Aipa Point. They were quite wild and probably inhabit this area from scarcity of water elsewhere.

650 - Building Fire Protection

The report on fire hazard reduction was mailed on the 11th. At 11:40
a.m. June 22, there was a small chimney fire at the superintendent's residence. A small amount of highly resinous soot had become ignited. The blaze was extinguished in a very few minutes with no resulting damage.

660 - Insecta and Tree Diseases

A report on the results of his investigations was received from O.O. McBride, Entomologist in Charge of the Bureau of Plant Quarantine, Honolulu, and copy furnished your office on the 18th.

900 - Miscellaneous

The entire staff was deeply grieved to learn of the passing of Chief Territorial Forester Charles Judd on the 29th.

Edward G. Wingate
Superintendent
Progress photo of 4th employees' quarters under construction by CCC, Job 308. Photo taken June, 1939.

Progress photo of 5th employees' quarters under construction by CCC, Job 308. Photo taken June 8, 1939.
CCS crew laying telephone cable underground, Kiluaea section, Job No. U-3
Showing detail of fireplaces installed in the new cottages being constructed by the OOO, job 309.
Cliff, west wall Haleakala near Observation Station. Short trail from road was roughed out by CCC to enable visitors to see silversword growing on cliff where they are relatively safe from vandals.
Close-up of cliff showing silversword growing near top. Only a few swords grow within several miles of where the majority of visitors congregate and most are disappointed in not being able to see them.
10-157  
(Dec. 1933)

DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  

TRAVEL REPORT  

(Kilimanjaro Section)  
Hawaii  
National Park for the month of June, 1933  

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UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT.

Haleakala Section, Hawaii National Park for the month of June 1933

<table>
<thead>
<tr>
<th></th>
<th>This Month</th>
<th>This Travel Year To Date</th>
<th>This Month Last Year</th>
<th>Last Travel Year To Date</th>
<th>Increase for Travel Year</th>
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<tr>
<td><strong>PRIVATE TRANSPORTATION:</strong></td>
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<tr>
<td>Cars first entry</td>
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<tr>
<td>Cars reentry</td>
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</tr>
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<td>Motorcycles</td>
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<td>1665</td>
<td>14400</td>
<td>6660</td>
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<td>Persons entering via other private transportation</td>
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<td></td>
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<td>Total persons entering via private transportation</td>
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<tr>
<td><strong>OTHER TRANSPORTATION:</strong></td>
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<td></td>
</tr>
<tr>
<td>Persons entering via stages</td>
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<td></td>
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<td>Persons entering via trains</td>
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<td>Persons entering otherwise</td>
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<tr>
<td>GRAND TOTAL ALL VISITORS</td>
<td>1945</td>
<td>21060</td>
<td>14400</td>
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<table>
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<tr>
<th></th>
<th>This Year</th>
<th>Last Year</th>
<th>Increase</th>
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<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
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<td>Automobiles in public camps during month</td>
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<td>Campers in public camps during month</td>
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**STATISTICAL REPORT NO. 6**
**FINANCE AND ACCOUNTS**
**JUNE, 1939**

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<tr>
<th>Symbol</th>
<th>Appropriation</th>
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<th>Obligated</th>
<th>Balance</th>
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<td>1,585.61</td>
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<tr>
<td>1003000</td>
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**Summary:**

- National Park Service, 1932-33: Allocated $100.00, Obligated $100.00.
- National Park Service, 1932: Allocated $56,000.00, Obligated $56,016.20, Balance $16.20.
- Roads & Trails, N.P. Park Serv.: Allocated $1,622.00, Obligated $1,585.61, Balance $36.39.
- National Park Service, 1938: Allocated $3,434,122.00, Obligated $3,341,257.27, Balance $137.73.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

Wailuku, Maui
June 30, 1939

Memorandum to Superintendent E. G. Wingate
through office of the Chief Ranger.

Enclosed are the weather report, half month and month
travel reports, and the narrative report for the month of June 1939.

[Signature]
E. A. Powers
Acting District Ranger
Memorandum to Superintendent E. G. Wingate
through office of Chief Ranger,

The following narrative report of the Haleakala Section for
the month of June is respectfully submitted:

000 General

010 Introduction. Silversword plants in the crater are being
watched with interest. Several are beginning to send up
bud stalks, and a large number seem large enough perhaps to
bloom this year. A short trail has been built along the base
of a cliff near Pakaoao Observatory which will enable casual
visitors to see many silversword plants growing on the sheer
rock pali. One of these plants looks mature and may bloom
this season.

020 General Weather Conditions. Light to moderate tradewinds have
prevailed all this month. A little more rain than last month
has enabled the CCC camp just to hold its own in regard to
water supply. July is normally wetter than June, so we hope
the crisis is past. Visibility was good in the crater every
day this month, with 8 entirely clear days, and 22 partly
cloudy. Between June 19 and 21, 0.45 inches of rain fell at
Pakaoao, so the need for hauling water to the Observatory has
been postponed at least. At the Ranger Station, 8 days were
clear, 1 was cloudy, and 24 were partly cloudy. A trace or more
rain was recorded on 22 days of the month, but total rain was
only 1.37 inches. Evaporation loss at the rain can near
Puu Mianiau was greater than the precipitation. A can to
measure evaporation has been installed by the side of the can
at 7450 near Halemaumau. Indications are that evaporation will
be found to be high. At the proposed intake, rainfall was 1.6 in.
Minimum temperature at the Ranger Station was 43 and maximum
was 79. Mean for the month was 58.5.

100 Administrative

120 Park Inspections.
127. Mr. Baylis, Camp Director of Wahiawa CCC camp, visited
the Haleakala camp with Mr. Wm. Crosby of the Territorial
forestry Service, on June 9.

129. Mr. Erlin Forbes, Educational Director of the Territorial
CCC spent the night of June 15 at the Haleakala camp.

150. A complete inventory of equipment, as of June 30, 1939,
was submitted to Headquarters.

170. Approved plans of the new water system were received on
June 29.
200 Maintenance, Improvements, and New Construction.

210. Inspection of all Crater cabins the middle of the month showed everything in shape for summer visitors. The long grass was trimmed around the Paliku Cabins, and the water systems checked. The Old Rest House was given a thorough cleaning and things put in shipshape order. There is almost no use of the structure by the public.

Re-painting on Paka‘a Observatory is completed except for the one side which overhangs the pali. Two days of favorable weather (with no wind) will allow completion of the job.

220. Improvements. The CCC trail gang roughed out a service trail 1500 feet long, leading from the rim of the crater near Paliku down inside the wall along the base of a cliff on which a number of silverswords may be seen. This trail puts some fine specimens in view within ten minutes walk from a car.

The diesel oil-burning range has been installed in the CCC kitchen and is giving good service.

230. New Construction.

Progress was good on the Ranger Quarters. Clapboard siding, and ceiling under the overhang of the eaves, has been completed and painted. All windows are installed, and as soon as their painting is finished, outside work on the house will be completed. Ceiling in the rooms is now being installed.

The 5000 gallon redwood tank to catch the runoff from the roof is finished, but so far has caught only enough water to cover the bottom and stop leaks.

Sites for the watershed and the five storage tanks in the new water system have been cleared and prepared for construction of the respective structures. Materials for the system are now being hauled.

400 Flora, Fauna, and Natural Phenomena.

420. The embryonic museum of Haleakala Section was enriched this month. George Kopa, assistant leader in the CCC, found a splendid stone adz, finished but unbroken, near Wailana Spring in Haupu Gap. "Bert" Tarleton, of Honolulu, who was in the crater to photograph silversword, brought a sling stone and some partly finished adz blanks from the ancient sleeping shelters near Kauikapalaoa.

470. About 100 head of cows are now being pastured in the Park. It is hoped they will be removed before they seriously damage the mamani and sandalwood trees.

490. Bud stalks are beginning to develop on a number of silversword plants in the crater. There ought to be a good bloom this season. Two healthy swords were found growing on the pali of Kaleipena, these become the outpost plants in Koolau toward Wainee, as none had been found prior to this below the Halemaum trail in Koolau Gap.

500 Use of Park Facilities by the Public.

510. Travel during June was greater than both last month, and this month last year. No reason for the increase is apparent.

540. Twelve persons, in three parties, have spent each one night in crater cabins. A family of 5, including three youngsters, are now in the crater on a hiking trip of 5 days duration.
510. Five persons, in two parties, were placed on the "black list" to be refused future permission to use the cabin facilities. The party of three allowed their dogs to sleep in Kapalaoa cabin, and the party of two left Kapalaoa cabin in a dirty and untidy condition. Both offenses were discovered by the Ranger after the guilty parties had left the crater. No arrests were attempted, as it was presumed that conviction would be difficult under the circumstances. Identity of the parties was known through permits issued in each case prior to the use of the cabin.

540. Thirty-one goats, 20 male and 11 female, were destroyed.

Miscellaneous

Ranger Powers led a discussion on the National Park and Haleakala at a meeting of the local Lions Club on June 27.

[Signature]

H. A. Powers
Acting District Ranger
Mr. Edward G. Wingate, Superintendent
Hawaii National Park

Subject: Report of the Hawaiian Volcano Observatory for June 1939

Dear Mr. Wingate:

The month of June was notable for a very pronounced seismic spell just before the solstice, which had begun in May. The work of the staff has been speeded up by the arrival of numerous summer rangers and scientific assistants in the Park. With the beginning of the new fiscal year, the Hawaiian Volcano Research Association cuts down its staff, and concentrates for the future on cooperation in publishing results with the University of Hawaii.

Volcanic Activity of the Month

The following are the local volcano data for the month:

<table>
<thead>
<tr>
<th>Week ending</th>
<th>Seismicity</th>
<th>Slides</th>
<th>Crack Openings</th>
<th>Local tremors &amp; Quakes</th>
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<td>17.50</td>
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<td>6.5 mm.</td>
<td>36</td>
</tr>
<tr>
<td>11</td>
<td>37.00</td>
<td>3</td>
<td>10.5 &quot;</td>
<td>124</td>
</tr>
<tr>
<td>18</td>
<td>33.00</td>
<td>9</td>
<td>4.5 &quot;</td>
<td>69</td>
</tr>
<tr>
<td>25</td>
<td>23.25</td>
<td>0</td>
<td>4.0 &quot;</td>
<td>58</td>
</tr>
<tr>
<td>July 2</td>
<td>11.25</td>
<td>1</td>
<td>5.5 &quot;</td>
<td>31</td>
</tr>
</tbody>
</table>

A peak of seismic activity was reached May 31 with three strongish shocks about Hilina Pali and Kilauea. A Houlu shock occurred May 29. The maximum of all activities was the second week of June; the seismic intensity however was highest at the end of May. A strongish shock occurred June 12 and another June 19, both apparently fairly deep under Kilauea; a singular shock June 24 was like a blast, of shallow origin under the northeast rim of Kilauea. Other parts of the world have reported volcanic activity including Mount Veniaminof, Alaskan Peninsula, Poes and Irazu, Costa Rica, Vesuvius, and Krakatoa. Opening of cracks along Chain-of-Craters was greatest for week ending June 11. Distant earthquakes were recorded June 1, June 8 and June 11.

Work of the Volcanologist

Throughout the month Dr. Jagger was engaged in preparing a manuscript for publication, and its illustrations, on "Volcanic Gases". Some results
that may prove of importance in this investigation are to the effect that carbonic acid gas and hydrogen, reacting with each other, produced the water vapor and carbon monoxide collected in the numerous vacuum tubes. It is found that when the analyses of the gas mixtures in these tubes are arranged in the order of decreasing water-vapor, that a mere improvement in technique of collection would have eliminated water-vapor altogether from some of the tubes that collected gases back of live flames in hot lava. Burning of the combustibles in air also took place, but this was superficial.

The Board of Directors of Volcano Research Association, and also the Regents of University of Hawaii met during the month and confirmed the project outlined in my report of June 3, 1939 for increasing use of Dr. Jagger for purposes of publication during ensuing years. S. Sato was appointed full time assistant under the University and H. Yesunaka half-time assistant under Research Association from July 1, both to contribute to the respective programs of those two institutions. Dr. Ballard was at the Observatory June 24-28 to overhaul the equipment and make plans for chemical collections and the spectrographic program to be carried out by a longer visit in August when he will be accompanied by Mr. Mau, assistant in chemistry. He had conferences with Mr. Waesche on the subject of the monthly gas collection made by pumping at the Sulphur Bank.

Dr. Jagger assisted Ranger Minter from time to time after the middle of the month in his work making an inventory of the instruments and other property of the Observatory belonging to the Government, as shown by past purchases of the Weather Bureau, the Geological Survey, and the Park Service. Mr. Waesche also helped Ranger Minter extensively with this Inventory which is now approaching completion.

An important letter was received from Dr. F. B. Jewett, Vice-President in charge of Experimental Laboratory of the American Telephone and Telegraph Co., New York. This had been induced by the visit here of Mr. J. S. McCulloch of that Co. Dr. Jewett is the leading experimental physicist of the United States on sound communication, and President of the National Academy of Science. I have had Mr. Waesche prepare for him a statement of the arrangement of actual and desired seismograph stations on this island. The inquiry stimulated by Mr. McCulloch was whether it would be possible, using existing telephone wires and wireless, to have seismographs, as nothing more than pendulums in underground chambers, do all their recording at the Observatory. I am sending Dr. Jewett a map and statement on this subject, including comment on recording tilt at a distance, a subject concerning which we have had correspondence with the telephone company here in the past. The registration of local earthquakes in a place like this, all at one central set of drums with uniform time service, would be not only a remarkable achievement in seismology, but of importance to the population of this island in making more precise our predictions of the place of coming volcanic eruptions.

The arrival at the Observatory of Dr. F. M. Bullard, petrographer and geologist of the University of Texas, increases our contacts with the educational world, as Dr. Bullard has been looking forward for some years to work at Kilauea. He has been assigned a desk in the middle office, and has learned much of the Observatory routine. He now changes records of seismo-graphs in the Observatory and at field stations, keeps weather records,
and has been working on earthquake statistics from the record books, as well as plotting such phenomena as tilt, earthquake locations and crack measurements.

Dr. Jagger has lent some assistance to Naturalist Fagerlund and Ranger Schultz in relabelling the museum specimens and supplying them with information about the collections.

Work of the Assistant Geologist

In addition to his occupation with the exceptional earthquake events of the solstice season, Mr. H. H. Waesche has brought the record of May earthquake locations up to date including the strong shocks of May 15, 23, 24 and 31. The gas collection at Sulphur Bank was made for Dr. Ballard on June 24. Some repair was necessary to the collecting tube as the stopcock was found to be corroded. Five of the driving clocks for drums of seismographs were overhauled during the month by Mr. Waesche and Ranger Minter and missing parts replaced. There are now on hand four clockworks with half-hour rotation, one with fifteen-minute rotation. Mr. Waesche has started the assistants in overhauling systematizing shop equipment and in weeding out useless seismograms from the Kona and Hilo records. The results indicate that this will increase the usefulness of these collections.

The most important improvements of the month concerned electrical operations utilizing the telephone wires for uniform time service of Park seismographs. During the first week of June the Mauna Loa seismograph was improved so that the timing from Observatory was made continuous, and not interrupted by switch-board operations. A system was worked out utilizing old bell ringer coils instead of purchasing new repeating coils for relays, which appears to be completely successful. A new relay was constructed for Uwekahuna seismograph, with the result that at present the seismographs of that station, of Mauna Loa and of Halemaumau are continuously supplied with minute marks and radio time corrections from the Observatory.

A short circuit was discovered in the telephone line buried in a pipe at Halemaumau. This was replaced by a new armoured cable. The Observatory telephones were put on an individual line to the fuse panel in Administration Building. Mr. Waesche assisted Ranger Jess in making tests of telephone circuits and in preparation of test instruments for the dual purposes of improving reliability of telephone service, and of time transmission. Some improvements were made in time signal receiver amplifier and in rectifier power supply, for time transmission. The general routine continued as usual, and about forty visitors came to the Observatory.

Work of the Assistants

S. Sato of the University of Hawaii, spent much time in assisting Dr. Jagger as draftsman, in typing manuscript, and in inspection of seismograms for rejection.

A. Okuda of the Research Association, continued mechanical work in the shops and overhauled numerous instruments.
Ranger Minter is an excellent machinist, and has given much assistance in the Observatory routine as well as in the shops. Along with Ranger Schultz he has taken his share in the upkeep of seismograph and Halemaumau records.

Visitors and Publications

Volcano Letter No. 463, January-March 1939 was issued by the University of Hawaii in cooperation with Hawaiian Volcano Research Association.

The following visitors came to the Observatory:

June 13, Lorin P. Thurston, Manager of Honolulu Advertiser, with Mr. Bartholomew, San Francisco representative of the United Press.

June 29, Professor and Mrs. James T. Norris, Director of Chemical Research and Professor of Organic Chemistry, Massachusetts Institute of Technology.

Very respectfully,

T. A. Jaggar
Volcanologist.
MEMORANDUM FOR THE SUPERINTENDENT:

CHIEF RANGER'S REPORT FOR JUNE, 1939.

000 General
010 No events of outstanding interest occurred during the month of June, with park visitors probably not exceeding those of May in number.
020 The month of June was wetter than usual but many clear days were experienced.

200 Construction
220 No new construction is being carried on by park personnel. The Volcano Golf Course boundary has been fenced and the secondary road to Kipuka Puuulu realigned and placed on government land by CCC. The CCC project of placing the telephone system in the headquarters area underground is about 75% completed. An enlargement of the present Volcano Golf Course is proposed, same to be placed entirely outside of the park.

300 Activities of other Agencies in the Park
310 A dinner dance was held at the Volcano House by Hilo High School alumni on the evening of June 3. About 500 persons attended.

400 Flora, Fauna, and Natural Phenomena
410 Rangers continued to conduct all tours and trips, including lectures at the Museum.

500 Use of Park Facilities by the Public
580 Four hundred cadets, officers and men from the USS Nevada were conducted through the park on June 25 and 26. No important persons were contacted by the Ranger Division during the month. Two local school groups and a group from the USS Dolphin were guided through the Kilauea section. A guided trip to the summit of Mauna Loa was made by Col. and Mrs. Oldsmith of Fort Shafter.

600 Protection
610 Regular patrols were made of all park roads, buildings, and areas by rangers. Patrols were also made to Apua Point, Mauna Loa, and Great Crack, Napau Crater, and Kanu Nui o Hamo.
620 An investigation was made of a theft at the CCC Camp. A detailed report of this has been submitted.
630 Eighteen goats and one pig were destroyed during the month.
640 Two fire protection talks were made at the CCC Camp.
650 A small chimney fire requiring the park apparatus was extinguished.
at the Superintendent's residence. There was no damage done. All members of the permanent ranger division completed Red Cross standard first aid course and were awarded certificates for both standard and advanced courses. One safety meeting was conducted at the CCC Camp.

**Miscellaneous**

Temporary Rangers Bullard, Baldwin, and Shaver entered on duty during the month, and Mr. and Mrs. Fagerlund of Virginia arrived in the park, he taking over the duties of Assistant Park Naturalist.

A physical inventory, now about 80% complete, of park equipment and property is being taken by the park Board of Survey.

Respectfully submitted,

[Signature]

Joseph P. Christ
Chief Ranger
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

July 3, 1939

MEMORANDUM FOR THE SUPERINTENDENT, THROUGH THE CHIEF RANGER,

SUBJECT: RANGER'S (OLSON) REPORT FOR THE MONTH OF JUNE 1939.

The most important work of the month has been the supervision of the exotic removal in Kipuka Pauahi and along roadsides by CCC. This work is coming along in good fashion. Clearing and landscaping of the park office grounds was started and partially completed but is at present awaiting some repairs to curbs and walks before completion. It is planned to move more of a variety of native plants into this area after the weeds have been killed and fertilizer is applied.

Five trail sign-posts were installed during the month.

The fences in the Giant Koa area were patrolled on June 2nd while making bird observations in this region.

One official trip to Hilo was made on June 3rd to meet the boat for Asst. Naturalist Fagerlund.

Visitor contacts for the month included the following;
June 6—All Day Hike, 4 visitors and Fagerlund.
10—1-1. Park Tour, 16 visitors in 3 cars.
12—Kipuka Pauahi Nature Walk, 21 visitors.
17—General Park Tour, 94 visitors in 7 cars.
25—USS Nevada—216 officers, men and cadets in 29 cars.
27—165 " 165 " 20 "
3—Dance Duty at Volcano House, 500 persons in 135 cars.

A 20 hour standard Red Cross, In first-aid was completed during the month; certificates received for the standard and advanced courses.

30 lantern-slide adapters to fit Kodaslides for use in the 4x5 projector were made for the bird slide collection.

On June 14 and 15 an overnight patrol trip was made to Apua Point with Chief Ranger Christ and Warden Medeiros.

4 Superintendent's reports were perused and notes made. One wild goat was killed and one 200# wild boar was killed in Bird Park.

One patrol was made to the Great Cracks area with Mr. Shaver. A new
preliminary alignment of the Mauna Loa Trail from the Six Tanks cattle-guard to the end of the Mauna Loa Truck Trail was staked out.

Repairs were made to a broken telephone line near Old Koa Boundary. A theft of money at the CCC Camp was investigated and a report has been submitted.

On June 30 the start of a 2-day trip to A'upa Point was made from Kipuka Puaulu corral. This trip will be reported in detail in the July report.

Wildlife Observations.

12 pairs of Japanese pheasants were noted in the Giant Koa area. These were without chicks but are apparently nesting there. 2 linnet nests were found near Giant Koa Junior. One Osso was seen at Lava Tube parking area on June 9th. The call of this bird has been heard several times in this region since that time.

The Chinese and Mongolian pheasants which were plentiful in the park two years ago are now hardly ever seen. This is strange as the Japanese pheasant shows definite signs of increase in spite of the certain mongoose depredations.

6 wild donkeys were seen near A'upa Point on June 14th. These are quite wild and probably inhabit this area from scarcity of water elsewhere.

One bird observation hike was made to Kane Nui o Hamo with Mr. Baldwing. Nothing of great importance was seen or learned on the trip. One trip was also made through upper Kipuka Puaulu in search of bird nests. One nest was found but was unoccupied.

One papala tree, 2 feet in diameter, was found in Bird Park and 4 additional opolu trees, in addition to those previously known.

One koa in juvenile plumage was seen in the Great Creek area on June 23. It had patches of brown on the wings, body and head.

Many koa seedlings about 8 inches in height are now seen in the cattle-grazed section of the park in the vicinity of Six Tanks. The exclusion of cattle from this section for the past 6 months or so has allowed these to come up quite plentifully.

One Hawaiian artifact, an inamona or kukui kernel pounder was picked up at A'upa Point and brought to Park Headquarters. This will be labelled and turned over to the Asst. Naturalist.

Gunder E. Olson.
Ranger.
MEMORANDUM FOR THE SUPERINTENDENT THRU THE CHIEF RANGER:

Subject: Narrative report for June.

Routine flag and switchboard duties were carried on during the month as well as routine patrol of Park roads and twenty-four duty. Also patrol of the Kipuka Puaulu area where I discovered pig damage and reported the same. The fence opening where the pigs were entering the fenced area was also found.

I acted as Ranger on duty at the Volcano House dance of June 17.

Public contacts for the month included 1 short tour, 1 general Park tour with the Oahu Fencing Club, 1 Kipuka Puaulu hike, 1 All day hike, One Mauna Loa Sunday trip, and assisted in the handling of the group from the USS Nevada.

Two days were spent on Sign maintenance and painting. Line #10 was repaired on two occasions. One break was at the 8500 ft. level on Mauna Loa, and the other in insulated wiring on the switchboard rack. Line #11 was repaired on one occasion, the trouble being caused by a broken insulator on the Ainahou branch. The telephone instrument inventory has been completed. I installed a length of 6 conductor cable at Halemaumau to replace the faulty conduit wire carrying our telephone circuit.

Several days have been spent with Ranger Schulz on property inventory. Some 4 or 5 days work remains to be done in order to complete this.

Highlight of the month was my trip to the summit of Mauna Loa on June 28 to 30 incl. Patrol and inspection work was accomplished enroute. I was accompanied by Col. and Mrs. Olsmith of Fort Shafter. Routine maintenance work was accomplished at the Puu Uaka lookout. This has been covered in a separate report.
One patrol trip was made to Hilina Pali and one to Kipuka Nene during the month.

Comments:

The trail maintenance work performed by the CCC organization was very good for the first mile above the gate on the Mauna Loa trail, but should be extended for another one-half mile to eliminate several sections of bad tread.

Signed: Arthur L. Jens
Park Ranger.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

July 3rd, 1939.

Memorandum for the Superintendent,
Thru the Chief Ranger.

The greater part of the month was spent in observatory routine and inventory of observatory property.

Ten and one-half days were spent on daily seismograph work, one day of which was devoted on June 12th to resetting all seismographs in this area and changing records due to the quake on that day. This time includes five trips to the Mauna Loa cellar.

Approximately two days were spent in repairs and improvements to the various seismographs, building a new relay, and long needed repairs to observatory machinery.

About 5 days have been spent on inventory of observatory property, wading thru old records and correspondence from 1928 to date. All evidence relating purchases on property, or transfers of property from the U.S.G.S., the U.S.C. & G.S., the Weather Bureau, and the Physiological Research Bureau has been noted. There remains quite a stack of records and correspondence to be searched thru before a list can be made up.

One day was spent on the switchboard, one and one-half days on routine patrol. Laid emergency line from the Pit telephone to the end of pole line in center to cut out a long standing short. Went to Hilo on June 17th, at 6:30 PM to bring Clifford James to the Park re theft at the CCC Camp.

Made one trip to Hilina Pali and destroyed four goats. Also ½ day on horseback from the Half way house on Kau road to the Corral at Bird Park, gaining a fair knowledge of that portion of the park. If it is contemplated using the old Peter Lee road while new Namalahoa road work is under way, will state that in my opinion work required to put the road in condition for present day traffic will more than outweigh the benefits gained.

The light earth used in the Mauna Loa Truck trail as binder is being carried away by wind, rain and action of car wheels, and last mile is getting quite rough. The area where fine crushed rock was used is standing up exceedingly well.
Attended one first aid class and the final examination, and have been issued the Standard and Advanced First Aid cards.

Conducted one all day hike, one ½ day hike, one KMC park tour, one Bird park hike, one Interisland tour and one showing of Krakatoa to 246 persons.

Suggest that the Direct current lathe grinder be sent to the Hilo Electric Light people to ascertain whether it can be worked over to use Alternating current at a lower cost than a new one. This grinder is at the Observatory and will be a most welcome and needed help in future instrument making.

The dry wall and cement work on the bridle path below the Museum is, in my opinion, an excellent example of the work being carried on by the CCC.

Respectfully submitted,

[Signature]

John E. Minter,
Park Ranger.
MEMORANDUM TO THE SUPERINTENDENT
TECH CHIEF RANGER CHRIEST:

SUBJECT: Ranger Report for the Month of June
(Schulz)

Duties Performed:

With the release from daily patrolling duties during the
past month, a full quota of days off and regular hours were possible.

Regular monthly Ranger and Naturalist Reports for the month
of May were made.

Regular flag, switchboard, and 24-hour duties were carried
out.

June 3 on duty from 6AM to 2:30AM (with two hours out) with
Ranger Olson at Volcano House dance. Also called for Asst Nat. Fager-
lund's baggage. Since this date have assisted rest of staff in the ori-
ientation of Fagerlund.

Guided scheduled trips and made 20 lectures to 2869 persons.

Practically completed museum accession catalogue of display
material. A small amount of "new" material is still in need of num-
bering and cataloging. Dr. T. A. Jagger went over and checked lables
with specimens. Several corrections and additional information were noted
on the cards.

The first aid course under Capt. Cullen was completed and
Standard and Advanced Certificates were received from the Red Cross.

Routine changing of seismograph records, measuring of cracks,
and distribution of the weekly Kilena reports were carried out under
the Volcano Observatory along with Rangers Minter and Bullard.

June 8 took progress photographs of telephone cable laying
and house building, and wrote news releases on park staff additions.

June 13 assisted Fagerlund in revising the schedule for the
remainder of the month of June, necessitated by a new schedule of
arrivals of the USAT "Frank".

June 22 sent two Kodachrome slides of the Nene to the Wild
Life Division in Washington.

June 10, 14, 15, 24, 26 were spent at least in part on in-
ventory with Ranger Jess.

A few general Park patrols and patrols thru Kipuka Puaulu
were made. On June 27 when no visitors showed up for the scheduled all
day hike, the opportunity was used to acquaint myself with the Emu
region of the park, patrolling paths to Hauna Hi, Puu Hope, Pit and
Cone Craters, and Kamakia Hills. The trails wherever followed were found
to be well marked with ducks and in fairly good condition.

Special parties contacted were:

- Hiloithalea Jep. School, 4th grade, (tour & movie) 75
- Papaikou School (" ") 40
- Soil Erosion party (movie)
U.S. "Dolphin" party (movie) 35
U.S. Naval R.O.T.C. and crew from the U.S.S. "Nevada"—in two groups. Assisted staff in conducting park tour and gave regular eruption film showing 400.

Aboard the U.S.S. "Nevada" showed "Krakatoa" to 1000.

Dark room work consisted of the development of one roll of six exposures of 3122 film and the printing of 35 copies of these negatives.

Comments:

1. The lawn in the dumbell shaped plot of the Museum parking area is again in need of cutting.

2. The CCC has obliterated the old construction road from the end of the Mauna Loa Truck Trail to the seismograph station in a very satisfactory manner.

3. Naturalistic landscaping around the massive concrete block in which is set the USGS datum marker across the road just SE of the Volcano House would be an improvement.

4. A "Caution-No Shoulder" sign might be desirable at each end of the curve of the Crater Rim Road where it descends into Kilauea Crater from Uwakahuna. It is felt that this rather sharp curve filled so as to be a cause-way is rather dangerous when unmarked.

5. At the date of compiling this report (June 30) the following items which were mentioned in the Monthly Ranger Report for May were still in need of attention:

- Repair of Uwakahuna closet door knob spindle.
- Fastening of loose cleats on museum display cases.
- Construction of railing around relief model of the Island of Hawaii at Uwakahuna Museum.
- Obliteration of the short cut between the last two legs of the descent of the trail into Kilauea Iki.
- Repair of the outside edge of a step near the top this trail. This is becoming worse rapidly.
- Temporary repair of the broken Men's toilet seats at the Lava Tube lavatory with cleats.
- The construction of makeshift toilet paper racks from wire.

Days Off:

All four of the quota of days off were taken as follows: June 18, 19, 20, and 29.

Natural Phenomena:

Readings of the Mauna Loa Rain Gage were: June 7-.18"; 9+.01"; 17-.24"; 21-.10"; 23-.01".

On June 7 four goats were seen on the Mauna Loa Truck Trail just below fire cache #1 and about a week later 28 individuals were noted at the Mauna levels in one flock. Many goat tracks and a few recent droppings were seen in the Enu Desert in the vicinity of Mauna Iki.

On June 28 a large number of linnets were seen in Kipuka Pu'-ulu in a loose flock.
June 27 eight Eoas were seen at Pau Koa and at the adjacent Pit and Cone Craters. The birds seemed unafraid and very curious, allowing close approach on the wing. None were seen to alight, and they frequently dipped below the general level of the ground so as to disappear from sight into the craters, esp. the "Pit Craters".

Small slides were noted in Hālāmauma on June 23 at 3:25 and 3:35 PM while measuring cracks.

Respectfully Submitted,

Paul Ernest Schulz
Park Ranger
MEMORANDUM TO SUPERINTENDENT WINGATE
THROUGH CHIEF RANGER CHRIST

SUBJECT: Monthly report for June.

I arrived and reported for duty on Saturday, June 17. The first piece of work turned out was a 12 page preliminary report upon bird studies which I conducted during the previous summer. This report was submitted on June 23. During the first week, a hike up the west side of the cinder cone Kilauea 0 Hamo was taken with Ranger Olson. We found that the Koepeko was being attacked by green grubs which ate their way up the center of the new shoots of the young trees. Birds were noticed to be most abundant in the taller trees alongside of the 1840 lava flow, rather than on the flow itself or in the heart of the dense forest.

Work was taken up on the comprehensive report on the bird work, and this necessitated my spending much time in the office. Meanwhile, a hike was taken through Bird Park with Ranger Olson in search of bird nests. Enroute, two Japanese Hill Robins were collected which turned out to be carrying a bacterial disease when dissected in the laboratory. These birds were put in the refrigerator until the next morning, at which time they were sent to Honolulu via airplane for study in the bacteriological laboratory of the Board of Agriculture and Forestry. In addition, laboratory studies were made of an Apapane, an Elepaio, and a Ricebird. Study skins of the Apapane and the Elepaio were prepared.

Respectfully submitted,

Paul H. Baldwin
Temporary Park Ranger

At 11:40 a.m., June 22nd the Park fire fighting force answered a call for a chimney blaze at the Superintendent's residence. A small amount of highly resinous soot had become ignited. The blaze was extinguished and the chimney cleaned in a very few minutes. No damage occurred.

cc - Chief Ranger
MEMORANDUM TO SUPERINTENDENT
THROUGH OFFICE OF CHIEF RANGER
SUBJECT: Monthly Narrative

June the sixteenth brought the return of Assistant Superintendent B. F. Moomaw, Jr. and Mrs. Moomaw to Hawaii National Park, after a visit to the mainland. Temporary rangers Paul Baldwin and Dr. Fred Bullard reported for duty at this time. Mr. and Mrs. Moomaw were happy to return while Dr. Bullard and Paul Baldwin are pleased to be in the National Park Service for the summer.

Several improvements in the park are quite noticeable since last summer. The personnel of the park staff is practically complete, which increases proportionately the service received by the visitors of the park. A checking device at the Hilo and Kau Entrance enables the Park Service to keep an accurate record of the number of cars entering the park. Another has been placed on the Rim Road. Newly painted signs are obvious. Transplanting of ferns on lawn in front of Volcano House and other points has helped to restore former natural conditions. Parking marks at the hotel are excellent.

The craters, plant and animal life of the park is well protected and affords a supreme pleasure to visitors.

Two temperature readings of the soil in heated area near Puhimau and Pauahi have been made with readings on June 26th being 75° to 181° F. near Puhimau and 71° to 61° at Pauahi. A second reading June 29th did not vary from the reading June 26th. These readings do not vary from those last summer. More readings will be made at the same points and others.

My time has been spent as follows: three days on the switch board, two days on telephone line construction, one on pig hunt, two painting signs, two on hikes, two on routine patrol, one trip to Hilo on official business, and approximately one day in the office on miscellaneous factors, such as reading, writing reports, and general contact.

A broader program of public contact is being planned by Park Naturalist Gunner Fagerlund.

Respectfully submitted,

Ralph K. Shaver,
Temporary Ranger
REPORT OF CAMP DIRECTOR FRANK C. HUSTON CCC RNP TO SUPERINTENDENT EDWARD G. WINGATE HAWAII NATIONAL PARK FOR THE MONTH OF JUNE, 1939.

During the month we enrolled 10 new enrollees and discharge 11. Four dishonorable, five for end of enrollment and two for securing employment.

There was a total of 288 mandays lost due to sickness, five enrollees were operated upon for appendicitis, these with some of those operated upon in May caused a loss of 141 mandays. These were six minor accidents with a loss of 17 mandays. There was a loss of 130 mandays from all other causes.

Two safety and recreational meeting were held during the month. Mr. Joseph Akan, Deputy United States Commissioner attended the meeting of June 28th, he gave a very inspiring talk to the enrollees which we are sure did them a great deal of good.

The safety assistant report states that all safety rules and regulations are being carried out by this camp.

Mr. Forbes the recreational supervisor made a short visit to the camp during the month.

The Project Superintendent report shows a daily average of 160 enrollees released to him during the month of 22 working days, a total of 3513 mandays worked on the projects.

R-3 Boundary Trail This project is 100% completed.

U-3 Underground Telephone System 202 mandays used on this project.

B-4 Employees Cottages 345 mandays used on this project which is progressing satisfactory under the park carpenter, Kawasaki.

M-9 Tennis Court and Minor Road Improvement 310 mandays used on this project.

250 F Removal of Exotics 904 mandays used on this project, the majority of this work was at Bird Park.

309 Camp Construction 469 mandays used on this project. Fireplace of No. 5 cottage nearing completion. Cemei is being put on and painting will start soon.

Work continues on ten other project in the park.
The recreational activities continued during the month with baseball leading, we had a perfect score as our teams lost every game.

The camp had a horseshoe tournament during the month with 14 teams playing.

The Doctor and Dentist made their regular trips during the month.

BALEAFALA SECTION HAWAII NATIONAL PARK MAST CCC STUD CAMP

The foreman reports 321 mandays during a month of 21 working days, with 37 sick and conditioning days.

He reports 2 safety meetings during the month.

Mr. Forbes, recreational supervisor visited the camp on June 14th & 15th.

The ranger cottage is some 85% completed.

The material for the water system is being hauled to camp.

Respectfully submitted,

Frank G. Huston,
Camp Director,
CCC HNP
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL PARK

MONTHLY REPORT
MAY 1939

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.

ARNO B. CAMMERER,
Director.
MEMORANDUM FOR THE DIRECTOR:

There follows the report of activities in Hawaii National Park during May.

000 - General

00 - Introduction

Interest during the month was focused on the seismic activity of Kilauea and Mauna Loa. Earthquakes originating beneath these mountains increased in frequency and intensity during the month and interest locally was stimulated by noticeable shocks in Honolulu and at Haleakala on Maui. The stronger of these earthquakes occurred on the 8th, 12th, 14th, 15th, 23rd and 24th. Some plaster walls were cracked in Hilo but no other damage was recorded. The staff watched both Kilauea and Mauna Loa closely for any possible recurrence of volcanic activity.

The ranger staff was more than usually busy, since Ranger Schulz had to continue work as acting park naturalist and in addition he and Ranger Winter were assigned to part-time duty at the Volcano Observatory to take care of work formerly done by employees of the Research Association who had been given leave to look for other employment.

The staff committee on exotic plants gave particular attention to Kipuka Puuanu, where the intrusion and rapid spread of introduced grasses and weeds is preventing reproduction of the native forest types. Conferences in the office and the field were held and Territorial Forester L.W. Bryan assisted by inspecting the area and advising on methods of elimination.

Action was taken on May 5 toward eliminating the grazing of live stock on park land in the golf course area by Herbert Shipman, new occupant of the Keahou Ranch, when he was requested to cooperate with the park in putting a stock-proof fence along this portion of the boundary. Such grazing had been largely discontinued by the former rancher, A.M. Brown. Mr. Shipman agreed to furnish the materials for the fence.

020 - General Weather Conditions

Total precipitation at park headquarters was 3.89" as compared with 11.28" for April. At Haleakala the ranger in charge reports .97" at the ranger station and .41" at the observation station. Wind velocity at Kilauea reached a maximum of 22 mph on the 11th.
110 - Superintendent's Special Activities

Between the 7th and 13th an inspection was made of the Haleakala section. Inspections were also made of the following locations and projects: May 18, proposed reconstruction of part of the Kilina Fall-Halape horse trail and coconut planting by CCC at Kalue; May 20-21 storm damage to road at Blackand Beach, Kalapa, where road was completely covered by upward of 6 ft. of sand and beach line had moved inland as much as 20 ft.; May 23, Naupaka Forests; and routine inspections of Chain-of-Craters road, Halemaumau, and going projects in Kilauea area. On May 3, a meeting of the Department of Agriculture Extension Division at Hilo was attended.

140 - Status of Private Lands

A deed dated May 4, was received from the Territorial Commissioner of Public Lands conveying a portion of the land of Kean in the vicinity of the Lava Tube to the United States. This land had been acquired by the territorial government from the Shipman Estate some time back but no deed had been received.

150 - Plans, Maps and Surveys

Plans and CCC job application for the construction of the seriously needed Haleakala water system, an allotment of $3500 for which had been made available from surplus CCC funds, were mailed on the 14th to the Regional Office following inspection on the ground by the superintendent with Ranger Powers during the week May 7 to 14.

200 - Maintenance, New Construction and Improvements

210 - Maintenance

The following is quoted from the report of the ranger in charge of the Haleakala section concerning the Haleakala road. "Damage to the pavement by pheasant droppings was established. Black colored droppings from birds which have been eating heavily of the berries of the "kukaiwai" or "kakainene" were noticed to be softening the bitumens binding the road metal in spots immediately under black droppings. The softening appears to be sufficiently permanent to permit traffic to suck out the loosened material, leaving small pits in the road surface, pits were not found exceeding an inch in depth, so that initial damage does not extend down to the base course."

220 - New Construction

The CCC camp director reports that the following projects are under construction by the CCC: Boundary trail, 96% complete; underground telephone system, park headquarters, commenced; trail to lava trees near Napaj crater completed; as was also the incinerator; sites cleared for 3 of the more simple type of employees' cottages; minor road improvement and tennis court at rear of the Volcano House commenced. Work on the employees' cottages has progressed nicely, with the roof on the 4th house and framing started on the 6th. The 6th of these cottages being constructed by the CCC at Haleakala was 40% complete at the end of May.
Special Improvement Activities

220 - Special Improvement Activities

CCC - 22 boys were enrolled in May and 11 discharged. 6 honorable discharges, 3 for expiration of term of service, 2 were needed at home and 1 secured employment. 50 dismorable discharges, including 1 for desertion, 2 for refusal to work and 2 for continual breaking of camp rules and AWOL. There was a total of 286 man days lost due to sickness. There were 7 operations for appendicitis with a loss of 16 man days, the balance due to colds complications, etc. The project superintendent reports a daily average of 161 enrollees released to him during the 26 working days, with a total of 3584 man days on the various projects. Two teams from our camp have been entered in the Hilo Recreation Center baseball league, and 5 entries in the Big Island Athletic Union wrestling bouts. At Haleakala the foreman reports 418 man days worked with no loss for bad weather and only 17 man days due to sickness. Job application was forwarded covering reconstruction of Hiiina Fall auto trail (Kilamea section) after an inspection by the superintendent on the 18th.

The following is quoted from the report of the BPR Principal Highway Engineer, on the survey of the road from the old park boundary through the Footprint area to the new boundary: "On May 8 a traverse of the existing road had been completed and plotted. With this as a base the writer made a paper location utilizing to the best possible the leveled area of the present road. The field party was instructed to proceed with location work. Cost to May 8 about $400."

Activities of Other Agencies in the Park

With Capt. J.K. Cullen, medical officer at Kilamae Military Camp as instructor, a standard Red Cross first aid course was begun, with all the ranger force, several of the CCC supervisory personnel and enrollees, park, mechanic and clerk-stenographer in attendance.

State, County or Municipal Legislation Affecting Parks

Information was received that the governor signed a bill providing for 2-year protection for certain game girds in the territory, but that he had vetoed a more comprehensive bill which would have provided permanent protection of certain native and migratory birds.

Interpretation

The rangers continued to conduct all naturalist activities with Ranger P.E. Schulz, continuing the duties of acting assistant park naturalist.

Cataloging collections at Uwekahuna museum was about 90% complete at the end of May. Some minor additions and improvements in displays have been made.
430 - Research & Observation

432 - Zoology: Four plovers or kolea were seen between Hilina Pali and the seacoast and one at the Steaming Buff during May. As these did not make the April migration they would bear watching to see if they nest here during the summer.

433 - Geology & Volcanology: On May 18 a radio from the Secretary notified Dr. Jagger of extension of his appointment for another year from August 1, 1939 through July, 1940, at which time he will commence his duties as professor of geophysics at the University - an appropriation having been provided by the territorial legislature to care for his work under the University of Hawaii. Dr. Jagger went to Honolulu on the 21st for conferences with the president of the Hawaiian Volcano Research Association and the president of the University. Throughout the month he was engaged in writing the manuscript and drawing illustrations of the "Crater" monograph, giving special attention to an investigation of volcano gases. This was the subject of correspondence with Dr. E.S. Shepherd of the Geophysical Laboratory in Washington; and of conferences with Professors Payne and Ballard of the University of Hawaii. Professor Payne is investigating the extent to which inert gas can be mixed with hydrogen and still produce the phenomenon of visible flame. More illustrations were duplicated by the photostat method in Honolulu.

Dr. Ballard is receiving every month tubes of sulphur bank gases from Kilauea for both spectroscopic and chemical analysis. The collection is made monthly by the observatory staff with a view to learning whether gas composition changes when a Kilauea eruption occurs. The spectograph purchased by the Park Service is being tested by Dr. Ballard and found to be very satisfactory.

500 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

Total travel to Kilauea was 15,994 as compared with 16,340 for May, 1938, and the ranger in charge of the Haleakala section reports 1290 as compared with 1260 for last year.

620 - Visitors

May 15 - W.F. Feldsweh, Meteorologist in charge of the Weather Bureau in Honolulu. Conferences were had with both the superintendent and Dr. Jagger.

May 16 - Mr. Tokitaro Saita, Earthquake Research Institute, Tokyo.

May 21 - National Commander and Mrs. Stephen Chadwick of the American Legion, for the day. They were escorted through the park by the ranger division.

Tito Schipa - renowned opera star for lunch. Sgr. Schipa had presented a concert in Hilo the previous night.
In addition there were 200 passengers from the RMS Franconia for the day on the 9th; 38 members of the Garden Club of America on the 13th and 14th, who were given special attention; several school groups, the Nuuanu YMCA Honolulu badminton team, 26th; Oahu Tennis Club, 30th; officers and men from USS Beaver and 3rd Submarine Division, 5th.

600 – Protection
610 – Ranger Service

Antone B. Medeiros entered on duty May 1 as junior park warden.

640 – Forest Fire Protection

Fire school has been conducted by the rangers in connection with safety meetings at the CCC camp. The dry driftwood in the vicinity of Kipuka None has been removed, eliminating this fire hazard.

660 – Insects and Tree Diseases

Mr. O.C. McBride, entomologist in charge of the Bureau of Entomology and Plant Quarantine, of Honolulu, arrived in the park on the 24th and remained until the 28th, on inspection of forest insect infestation.

900 – Miscellaneous

Mr. and Mrs. Clarence Underwood – CCC chief clerk and quartermaster – are the very proud parents of a baby girl, born on the 5th, and named Christine.

During the last year badminton has become quite a popular sport, particularly on the Island of Hawaii and in the park. This popularity and general interest in the game was much stimulated by the visit to this island of the badminton team from the Honolulu YMCA, Honolulu, which played a series of matches against Hilo teams. The exceptionally brilliant playing of J. Yoshimura and S. Nakano, Nos. 1 and 2 of the Honolulu team showed the heights to which this game might be raised and was the principal factor in creating new interest in the sport. The game has been a particular boon to the park employees, as the generally rainy weather prevents their engaging in many other sports. The badminton court at the Volcano House is constantly crowded in the evenings with families of park employees. It is hoped that the park may be able to develop a team of its own before many months. Certainly there is no lack of interest. 88 – Interior Department Recreation League officials please take notice.

Edward G. Wingate
Superintendent
Badminton team from Nuuanu YMCA, Honolulu, who visited park as guests of park operator and superintendent following series of matches in Hilo. The superintendent, left in front row, is apparently still befuddled by the brilliant shots of territorial champion James Yoshimura, second from left and Setano Nakano, runner-up, 5th from left. Nakano was 5 times tennis singles champion of the territory and has played many of the world's best. Miss Barton, 3rd from left, Honolulu women's runner-up, was outclassed by Miss Hope Tani of Hilo, 4th from left. Hilo won easily in total matches, but its best were no match for Nakano and Yoshimura. May 26, 1939
Coconut planting being done by CCC at Halape

Coconuts planted by the CCC at Halape in 1934 and by work forces about 1930

Morning glory vines (Ipomoea spp.) at site of old coconut planting at Halape. Frequent clearing is necessary to prevent their choking out young trees.
CCC project 308 - progress photograph of 4th set of quarters. May 20, 1939
Showing progress on employee's residence at Haleakala, CCC job 308, Upper picture taken May 27 and lower May 27
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

Kilauea Section, Hawaii National Park for the month of May, 1939

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UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

Haleakula Section, Hawaii National Park for the month of May, 1933

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During the month we enrolled 22 boys and discharged 11, 6 honorable discharges, 3 for Expiration Term of Service, 2 needed at home, and 1 secured employment. Five dishonorable, one desertion, two refusal to work and two for continual breaking of the camp rules and AWOL.

There was a total of 285 man days lost due to sickness, we had seven enrollees operated upon for appendicitis with a loss of 69 mandays, 7 minor accidents with a loss of 16 mandays, the rest was due to colds, inoculations, etc.

Two safety meetings were held during the month, Dr. Phillips spoke at one meeting. The Safety Assistant report shows that all safety rules and regulations are being carried out by this camp. The Project Superintendent report shows a daily average of 161 enrollees released to him during the month of 22 working days, a total of 3534 mandays on the projects.

R-3 Boundary Trail
118 mandays used on this project which is now 98% completed.

U-3 Underground Telephone System
This project started the last month upon Foreman Maka's return from Maui.

B-4 Park Employees Cottages
The site have been cleared and footings formed for these cottages, but actual construction cannot be started until about the 20th of June when the materials can be purchased.

R-5 Napau Tree Trail
This project was completed this month.

U-5 Incinerator
This project was completed this month.

M-9 Tennis Court & Minor Road Improvement
288 mandays were used on this project this month.
227 RT Road & Trail Maintenance

134 mandays were used in repair work on the Hilina Pali road, the Mauna Loa horse trail and the horse trail below the Wekahuna Museum.

308 Camp Constructions and Construction of Personnel Cottages

Work continues on these cottages. The roof is on #1 and framing started on #5.

Work continued on some twelve other projects in the park during the month.

The recreational activities continued during the month with two teams entered in the ERC Baseball League.

We also had five entries in the HIAU wrestling bouts.

The Doctor and Dentist made their regular weekly trips during the month.

Haleakula Section, Hawaii National Park, Maui, CCC Stub Camp.

The foreman reports 418 mandays worked on projects with no loss of time for bad weather and only 17 mandays lost due to sickness.

Foreman Maka returned to the main camp after installing the light plant.

The Cottage is some 40% complete. Dr. Jones made his regular inspection.

Respectfully submitted,

Frank C. Huston,
Camp Director,
CCC HNP
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII Wailuku, Maui
June 1, 1939

Memorandum to Superintendent E. G. Wingate
through office of Chief Ranger.

The following narrative reports of the Haleakala Section
for the month of May 1939 is respectfully submitted:

000 General

010 Introduction. Possibility of a water shortage is becoming
acute. About 7000 gallons are still available in storage,
with the coming month, June, normally a dry month. All
possible conservation measures are being employed.

020 General Weather Conditions. Light to moderate trade wind
conditions prevailed during most of the month. A few
days, May 8 to 11, had moderate winds from the southwest,
and from May 29 to the end of the month, strong trades
were blowing. There was only one entirely cloudy day during
the month. At the summit, eleven days were entirely clear,
and nineteen days were partly cloudy. A total of 0.61 inches
of rain was recorded at Pakaoao, which occurred during four
different rains. At the Ranger Station, there were light
mists and showers on twenty-two days out of the month, but
the total rain was only 0.97 inches. About 2.50 inches was
measured on the Park boundary near Puu Nianiau, and about
1.30 inches fell at the proposed intake. The minimum
temperature recorded at the Ranger Station was 40 F. and the
maximum was 78 F.

100 Administrative.

120. Park inspections.
121. Superintendent E. G. Wingate spent the week from
May 8 to May 12 inclusive in a general inspection of
work now in progress and the proposed layout of the
water system.

150. Equipment and supplies.
A small hand drill, steel brushes, and a tap were purchased.
Thirteen worn casings of various sizes were advertised
and sold during the month. $37.80 was realized from the
sale.

170. Maps, plans, and surveys.
A contour map of the rim of the crater adjacent to Pakaoao
Observatory was prepared for use in designing a proposed
small Rest House.

Plans, specifications, and material list for a proposed
water system for the Ranger Station was completed. Materials
costing about $2500 will provide a 5000 foot water shed, an
intake in an ephemeral stream bed, 30,000 gallon storage
capacity in five redwood tanks, small sand filter, a fire hydrant line (under 75 pounds pressure) and the distributing pipe line system.

200 Maintenance, Improvements, and New Construction.

210. Maintenance work on Pukoua Observatory is proceeding at a pace determined by weather conditions. All leaks in the roof have been repaired, and the roof cleaned and scraped ready for repainting.

During the inspection trip of Superintendent E. G. Wingate two new road maintenance problems were discovered. An imported, virile, creeping grass (kihiu) is attacking the pavement in two spots. Various methods of removing it without damage to the pavement are being tried. Digging it out proved to be too damaging to the road. Killing it with a blow torch, and by drenching it with creosote are now being tried, each method giving promise of success. The cheapest method will be adopted.

Damage to the pavement by pheasant droppings was established. Black colored droppings from birds which have been eating heavily of the berries of the "kukaiho" or "kukainene" were noticed to be softening the bitumen binding the road metal in spots immediately under black droppings. The softening appears to be sufficiently permanent to permit traffic to suck out the loosened material, leaving small pits in the road surface. Pits were not found exceeding an inch in depth, so that initial damage does not extend down to the base course.

A small, neat, permanent shed was constructed to house the gas engine and electric generator in a location that is not visible from the road or from the Ranger Station area. The plant is now in service, lighting the CCC camp. Shelves were constructed in the office at the Ranger Station.

230. Good progress has been made on the Ranger Quarters by the CCC unit. The fireplace and chimney has been completed and tested and in satisfactory and a splendid looking job. Wiring of the house has been completed except for installation of fixtures which must wait until the interior finish is done. Plumbing work on the sewage and waste disposal system is completed except for connection to fixtures and connection to cesspool.

Roofing is completed, exterior wall sheathing treated with creosote, exterior door casings installed, water table completed, and clapboard siding finished up to the level of the windows. Installation of window casings and completing of siding is being temporarily held up by the strong wind which prevents placing the building paper.

A five thousand gallon redwood tank is now being installed to catch any water from the new roof.

500 Use of Park Facilities by the Public.

510. Travel during May was about half that of March, but greater than that of last May. No reasons are obvious for the decrease.

540. Crater cabins were used by 9 persons in three different parties.

600 Protection.

640. Thirty-five goats, 24 male and 11 female, were destroyed.

H. A. Peters
Acting District R. 03
MEMORANDUM FOR THE SUPERINTENDENT;

SUBJECT: Chief Rangers,, narrative report for May, 1939.

010 INTRODUCTION
Principal events during the month were the occurrence of several moderate earthquakes and a visit by the passengers of the SS Franconia, a round the world boat. A busy month was had by the ranger division which would indicate the beginning of a busy summer with a decided increase in visitors over the past two years.

020 GENERAL WEATHER CONDITIONS.
Weather during May has been generally good in the contrast to March and April. This has been, to some degree, responsible for the sharp increase in travel and park visitors during May.

150 PARK INSPECTIONS
Patrols were made by the division as follows.
2 to the sea coast.
1 to Kalapana.
1 to Mauna Loa.
2 to Napan and Lava Trees.
Also routine patrols of roads, and trails, etc.,

270 SPECIAL IMPROVEMENTS ACTIVITIES.
The overhead telephone line at Halemaumau between the phone box and Seismograph pit was placed underground.
Parking stalls were painted at the Volcano House to assist in parking and aid in taking care of the larger crowds. At present only 75 autos can be parked within the Volcano House grounds. In this connection it is respectfully recommended that additional parking area be provided to care for peak crowds. This should be increased to at least 100 or 125 cars.
LECTURE AND GUIDE SERVICE

A great deal of the rangers' time was taken up during the month with public contact work. Rangers continued to conduct all tours, hikes and museum lectures.

ZOOLOGY

Four plovers or Kolea were seen between Hilina Pali and the seacoast and one at Steaming Bluff during the month. As these did not make the April migration month, they would bear watching to see if they nest here during the summer. Other observations are reported in the attached rangers' reports.

VISITORS

Contacts by the ranger division includes the following groups:
- Commander Chadwick, American Legion, and party
- Garden Club of America, 38 members
- Boy Scout under Mr. Bert Chilson
- S S Franconia party, 220 persons
- Oahu Champion Softball Team
- 2 Pahoa School groups
- Hailehu School
- Oahu Tennis Club
- USS Beaver
- 3rd Submarine Division
- Kepapale School
- Honolulu and Hilo Badminton Teams

POLICE PROTECTION

Daily patrols were made of all park roads, trails and frequent patrols to Hilina Pali area.

It is recommended that CCC trucks leaving the K.M.C. theater at night be asked to let civilian cars proceed out of the grounds first to eliminate possibility of accidents in passing the trucks.

BOTANY

Meeting of the committee on exotic plants were held and work started in Kipuka Puamua and along roadside on removal of exotic weeds and grasses.
660 INSECT AND THEIR DISEASES

Mr. O. C. McBride, Entomologist in Charge, Bureau of Entomology and Quarantine, Honolulu spent a day in the park on inspection of forest insect infestation. No report has been received to date.

680 MISCELLANEOUS

12 wild goats were destroyed during the month.

JOSEPH H. CHRIST
Chief Ranger
MEMORANDUM TO THE SUPT. THRU THE CHIEF RANGER:

Subject: Narrative report for May. (Jess).

The major activity for the month has been telephone line maintenance. Considerable work has been done on Line #10 and #11. No. 11 is in good shape but some work remains to be done on #10. The instrument inventory has been completed, except for the two instruments installed at the 10,000 ft. and summit resthouses. These will be checked on the next trip to the summit of Mauna Loa. A repeating coil was installed on the main line and a phantom circuit line constructed to the seismograph cellar at the end of the Mauna Loa truck trail. New outside wiring has been installed at the Volcano House.

The two traffic counters were removed from the Rim Road and installed on the Pahoa Highway, one at the Hilo Entrance and the other near the telephone at the old Kau Entrance bay. Some time was spent with Ranger M inter in installing the experimental counter on the Rim Road.

New trail signs were installed on the Steaming Bluff and Mauna Iki trails.

Two patrol trips were made to the Kilina Pali area and one to Kipuka Nene and return. Also, considerable routine patrol of the Park was accomplished.

A total of 228 contacts were made during the month. This included 1 Kipuka Puaulu hike, 2 General Park tours, 2 Two Hour tours, 1 group from Pahoa School, the Oahu Tennis Club group, and the Franconia Group. During the Franconia Tour, I was stationed at Halemaumau and later assisted Ranger Olson at the Volcano House.
Two rolls of 8122 film were developed, and 52 4x5 prints were made during the month.

Flag and switchboard assignments were taken in my turn.

I have attended 4 meetings of the local Scout Troop, and have served as Acting Scoutmaster during three of these. I have given a lecture in 2nd. class signaling, and a practical demonstration in First Aid work.

One safety meeting at the CCC Camp was attended during the month and a short talk given on Fire Suppression methods.

One Board of Survey meeting was attended during the month.

Signed: Arthur L. Jess
Arthur L. Jess, Park Ranger.
Memorandum to the Superintendent,  
Through the Chief Ranger.  

Narrative report for the monhtoof May, 1939.  

Major activity during the past month consisted mainly of the Observatory routine work, covering approximately 14 days, and included repairs to drum and driving mechanism for the Uwekahuna seismograph, and improvement of the record scanning device in the observatory basement.

Eight trips to the Mauna Loa seismograph cellar, taking one-half day each, were made to change the drum there, and included the re-setting of the instrument after the quakes of May 15th, 23rd, and 24th.

Approximately 2 1/2 days were spent in inventory of observatory property. I will have to request Dr. Jaggars assistance in part of the inventory as I cannot identify many of the instruments, and he can come nearest to knowing ownership.

The overhead wire at the Pit has been placed underground and is operating satisfactorily. The ditch will need some refilling and weathering before it will look natural. Installed by Okuda and myself.

A phantom circuit line was installed at the Mauna Loa cellar by Ranger Jess and myself and is not visible to tourists from the road and parking space. Also assisted Mr. Washo in repairing and resetting the E-W component that was broken by the quake of May 24th.

Seven first aid classes were attended during the month.

Two hours machine work was done for the Park Mechanic.

Two afternoons were spent in routine patrol of the Park.

National Commander Chadwick and party of Legionnaires from Hilo and Honolulu was conducted thru the park by myself on May 1st, and I represented the Service at luncheon in the Volcano House, that date.

During the month I conducted; one special trip of 23 people from the USS Beaver; one Mauna Loa tour of 28 people; one Park tour of 36 people; and one Interisland tour of 23 people. Have contacted 148 others during the months during various activities.
Krakatoa was shown twice during the month with attendance of 275 people, announced by myself.

On May 11th I went to Hilo to bring my son home with a sprained ankle. Was gone approximately 2 1/2 hours.

On May 13th, Ranger Olson and myself met the Garden club on their arrival in Hilo.

Destroyed seven goats during May, one trip.

The dry rock wall that is being installed by the CCC enrolles is about one-half completed and an excellent piece of work is being done. Work has not as yet been started on the cross walls in the two ditches across the trail, but probably will be started about June 5th.

Have had several very favorable comments regarding the new trail signs that have been installed.

John E. Minter,  
Park Ranger.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII
May 31, 1939

MEMORANDUM TO SUPERINTENDENT WINGATE
THRU CHIEF RANGER CHRIST

SUBJECT: Ranger Report for the Month of May

Duties Performed:

Despite the fact that working day hours were from 6:30AM to 5:30 or 6:00PM or longer at least every second day during the month of May, it was impossible to properly patrol the "Mauna Area" to which the undersigned was assigned. Only three of an allowed six days off were taken. The only trail patrolled was a portion of the Mauna Iki trail from Hualalai Highway. Hikuma Punalu and Highway were not patrolled daily, but as often as was possible.

Regular monthly Ranger and Naturalist reports were made as well as the schedule for Volcano Observatory duty.

Regular flag, switchboard, 24-hour duties were performed as well as carrying on the pleasant and varied duties as acting on the pleasant and varied duties as acting as Park Naturalist and as helper at the Volcano Observatory.

First aid classes under Captain Cullen were attended regularly and found interesting and profitable in spite of a repetition of subject.

One driver of a stalled truck on the Mauna Loa highway was assisted on May 1st.

On May 3rd assisted in a meeting of members Christ, Olson, and Mollenhoff of the Roads and Trails Committee.

On May 4th one news release was issued, and two others to accompany the monthly Informational Program schedules were also written.

Photographs of Nene habitats, of house building progress, and a series on Dr. T. A. Jaggar and Observatory, and of the Waiala Additions (proposed) were made, developed and all but the last printed. 16 x 20 negatives and a roll and a half of 35mm negatives were developed and 50 prints and enlargements were made, partly on privately owned papers. On May 9 while escorting the Garden Club of America Party at Hanae the opportunity presented itself to take Nene pictures at much closer range than was the case before (in March). This was done with private camera and Kodachrome, but some transparencies will be available to Hawaii National Park.

Other special parties contacted were:

Aboard the USS "Beaver", 150
3rd Submarine Division, 30
Four Island Amateur Athletic Federation
SS "Frankonia", 250 in two groups
Honolulu Softball Team
Russell Erinos of the Honolulu Associated Press
Naalehu School
Pahoa School, two groups.
Eupuna School
Hokulani and Hilo Badminton teams
Hilo Boy Scouts
A total of 20 lanterns were given at the Uwekahuna Museum in conjunction with the eruption moving pictures. Numbering and cataloguing of museum specimens was continued now being 50% complete, and minor improvements in display were made. May 20 had a collision in USDI 1168 with USDI 1164 driven by Ranger Minter. Stalled with car 1158 on Mauna Loa Truck Trail with three broken rear spring leaves of which two and one half proved to be old brakes.

May 28 and 27 prepared copy for and mounted Nema habitat photos for the Wildlife Division.

May 23 took Emanuel Escobar of Olaa to EMC hospital. He was one of these allowed to get rock along the Mauna Loa Truck Trail. Escobar met with an accident: crushing one finger between a large rock and truck wheel rim. When met at the locked gate bleeding had practically stopped so no first aid was given. Captain Cullan treated dressed, and xrayed the patient's finger.

Comments:

1. Regarding the railing around the relief model of the Island of Hawaii at the Uwekahuna Museum suggested in the regular Ranger report for the month of April and also in the memo to the Superintendent on May 21, and May 27, I wish to say that the price of such a railing need be only nominal. A 1/4 or 3/8 x1/2 inch upright two feet long, projecting one foot above the model, at each corner, and four pieces of similar cross section joining the four uprights around the perimeter of the map would be sufficient. Strength of the railing is not essential in this case. A neat cheap finish would be a plain dark walnut oil stain.

2. Attention is again called to the fact, noted in the regular Ranger report for the month of April, that the twelve marked loose cleats on the museum display cases are in great need of fastening by the carpenter. No expense for materials will be necessary.

3. A door knob on closet in Uwekahuna Museum is also in need of repair. The spindle has been broken.

4. A regular schedule of Naturalist and Informational activities has been approved and issued to the public. It is urged that this be a strictly adhered to as a minimum, last will be created in the public mind. The regular scheduled end Monday showing of the "Eruption" film in the month of May was not held. This was caused by a special showing of the film on the preceding Friday or Saturday, of which the undersigned was not informed, and when he went to introduce the film on Monday May 8th as is the custom, the EMC theatre was found locked and dark. Special shows are surely desirable from time to time but it is not at all unlikely that some Park visitors or local groups missed seeing this scheduled worthwhile picture because of the unpublished change in schedule.

5. Numerous blackberry suckers have been noted thriving around the Park headquarters office building and also in the zone between this building and the ranger residence area. It is suggested that these be destroyed before they become more firmly established and before they bear and drop matured berries on the ground.
6. The wire barrier at each end of the now "Hapu" shortcut between the Naturalist's residence and the headquarters parking area is effective. However the wire is wound around the trunks of the ohia with no protection. Since the barriers will have to remain in place till the new planting has made appreciable advances it is suggested that longitudinal wooden cleats or cloth or rubber wrappings be placed on the trunks in question so that the ohia trees will not be damaged by partial or complete girdling.

7. It is also suggested as was done in the regular report for the month of April that the short cut between the last leg of the zig-zag descent into Kalua Iki and the straight path continuing toward the Lava Tube be obliterated. It is unsightly and presents a hazard to the many people who insist on using all existant short cuts. This can very easily be done by the planting of a dozen or so Hapuas and Amaumauas. A small temporary fence may or may not be considered necessary.

8. Avery short distance below the starting point of the descent into Kalua Iki two rocks have broken from the outside edge of the path presenting a serious hazard to tourists using the trail. This is especially true since no guard rail is present and since many of the visitors wear rather unsteady high heels.

9. Numerous instances have been noted in which CCC boys and BMC soldiers have been soliciting "rides" using the well known "thumbing" method along roads within the boundaries of Hawai National Park. It is suggested that the park policy with respect to this activity be clarified.

10. The second (and last) toilet seat on the "men's" side of the Lava Tube lavatory has now disintegrated. No seats are therefore usable to male visitors at this point--surely an inconvenience to some. It is suggested that until the ordered composition seats arrive the two seats in question be repaired as can easily be done thru the use of a few sturdy cleats.

11. It is realized that the public often abuses and breaks such articles as toilet paper racks. However in the great number of lavatories where these are now missing, with no expense very serviceable and neat racks can be made in each with a few inches of heavy wire and two nails. This deficiency is a very minor item, of course, but is one of the many small details which unconsciously influence visitors' opinions if not of the park, at least of the maintenance service of the National Park Service.

12. It is suggested that whenever it is impossible for the regular museum man (at present Higa and Gonalsves) to be on duty, the Naturalist or Acting Naturalist be informed by DDC officers of this fact promptly so that we may proceed to the Uwakahuna Museum and give specific instructions to the temporary man on such duties as: the keeping of travel count, the sale of and daily report of publications, cleaning of the museum, proper attitude to the public, etc.

Days Off: It was possible to take only three of the six scheduled days
off as follows: May 2, 7, 22.

Fauna and Flora:

The undersigned is not included in the exotic control committee and other wildlife observations were of not great interest.

Respectfully submitted

Paul Ernest Schulz
Park Ranger, Acting Asst Park Naturalist.
MEMORANDUM FOR THE SUPERINTENDENT, THROUGH THE CHIEF RANGER.

Subject: Ranger's (Olson) Narrative Report for May, 1939.

The most important work of the month has been the supervision of the removal of the exotics from Kipuka Puaulu by a gang of CCC. In this connection, two meetings of the exotic committee were held. On May 5th, Mr. Wingate, Mr. Christ, Mr. Mollenhoff and myself went through Bird Park and discussed methods to combat the exotic grasses and weeds which are encroaching there. On May 23rd, Mr. L.W. Bryan, Mr. Wingate, Mr. Christ, Mr. Mollenhoff and myself also discussed the same problem. A gang of CCC will be employed in Bird Park for some time in the removal of the worst weeds and grasses, and in replanting with desirable understory plants.

Contact work during the month included the following groups:
May 9, S.S. Franceona, about 230 persons in 50 cars. Duty at Lava Tubes and at Volcano House.
May 11, Oahu champion softball team, 20 persons in one car.
May 12, Russ Brines, Associated Press employee. Hike to Kalapana with him and Mr. Schulz.
May 13-14, Garden Club of America, 38 persons in 3 cars. At Volcano House and with Mr. Schulz on Park Tour.
May 21, Mauna Loa Truck Trail Tour, 6 persons in 2 cars.
May 30, Mr. Bert Chilson and Boy Scouts and Leaders, 18 persons in 4 cars. All-day forest study hike.

Darkroom work for the month included the mixing of chemicals for developer and hypo formulas, and the finishing of 57, 4x5 enlargements, 7, 4x5 prints and the development of 18, 4x5 negatives. Photos were also prepared and submitted to Russ Brines of AP and Paradise of Pacific Magazine.

One patrol hike was made to the new Napau Lava Trees with Mr. Christ and Mr. Borges Medeiros. Photographs were taken of the Lava Trees. One patrol hike was made to the Summit of Puu Huluhulu which included the circling of the two craters. The Sandalwood and part of the Hakalaua trails were also patrolled.

A meeting of the committee on signs was held and wordings of a new set of trail destination signs have been prepared and are being constructed by a CCC enrollee under the direction of the Chief Ranger.

Several reports were prepared during the month for the Ranger Division. A detailed report has been submitted of a 3-day trip to Mauna Loa summit, which was made this month.
WILDLIFE ACTIVITIES AND OBSERVATIONS.

A meeting of the Manuiki Society of Hawaii Island was attended on the evening of May 2nd.

Hike to Kalapana. The rarier birds observed on this hike included Akepeue, (Loxops coccoinea), Olive Green Creeper, (Oreomystes mana), and Chinese Thrush, (Trochaleptoramus canorum).

Muna Doa trip. Only 2 omano, (Phaeornis obscura), were seen on this trip. These were noted about 1 mile mauka of the place where several were seen about a month previously. One omano was seen to fly out of a deep hole in the lava, possibly indicating that the pair nest with in such holes or lava tubes at this unusual elevation which is about 9,000 feet.

An occupied nest of English Sparrows, (Passer domesticus) was found in the park residence area. Due to its inaccessibility it has not been examined or photographed to date.

A nest of Pueo, (Asio accipitirinus sandwicensis), was found by Mr. Christ while a group of us were going through Kipuka Puaulu. It was located in the grassy meadow on the next east end of Bird Park and contained one egg. The nest was again visited 3 days later and found to have been violated by mongoose and the egg destroyed. The nest was crudely constructed and located in a small opening or hollow under overhanging, partially dry rat-tail grass. The partially cup-shaped bed was of dried grass. The egg was about the size of a leghorn pullet egg and about the same color but with a slightly larger width dimension. The owl was seen to fly away from the nest as we approached.

A nest containing 3 newly hatched Pekin Nightingales, (Lusothrix lutes) was discovered near the Kipuka Puaulu Trail in a young papala kepau seedling. This nest is well concealed but is located only about 48 feet above the ground. Measurements will be taken and photographs made of this nest as soon as the opportunity presents.

A short paper on ferns was prepared, submitted and accepted for publication in the Paradise of the Pacific Magazine.

Several Linnet, (Carpodacus mexicanus frontalis) have been seen recently near the Horse Corral and Bird Park picnic grounds. Some of these are noted to be colored a pale red about the head and shoulders and have the typical finch-like beak.

Several holo, (Anous minutus melanogenys) were seen near at the seacoast on our Kalapana hike.

A forestry study hike was conducted for the advanced Boy Scouts and leaders under Mr. Bart Gilson which was their third and final lesson in forestry, tree and nature study. All took copious notes and showed a gratifying interest in the native trees and plants.

Olson, Ranger.
Memorandum to Superintendent E. G. Wingate through office of Chief Ranger.

Enclosed are the weather reports, half month and monthly travel reports, and the monthly narrative report for the month of May 1939.

H. A. Powers
Acting District Ranger.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

MONTHLY REPORT
APRIL 1939

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.

ARNO B. CAMMERER,
Director.
MEMORANDUM FOR THE DIRECTOR:

There follows the report of activities in Hawaii National Park during April, 1939.

000 - General

The activities were of a purely routine nature throughout the month, with considerable time being devoted by the rangers to fire protection and fire prevention. Careful inspections were made of the new CCC camp by the superintendent, in order to assist in improving the sanitary facilities and determining ways and means of encouraging the enrollees to make proper use of the facilities. With the various races and their manifold mixtures in the CCC camp here, proper health habits are most difficult to inculcate. Under the CCC, work previously done in planting coconuts and puhalu along the beach was again taken up and it is expected that this important reforestry project will before long greatly improve the seacoast campsite areas. Despite the efforts of this office and favorable resolutions passed by the Board of Supervisors and other interested organizations on this island, because of the urgent necessity to economize territorial appropriations, it was impossible to get favorable action toward appropriating money for the acquisition of privately owned land in the Kalapana addition. The fees recently instituted for the use of the Muna Loa resthouse is working out very satisfactorily. The house is apparently being kept in a very much better condition than when it was free to the public.

020 - General Weather Conditions

There was a heavy snowfall on Muna Loa and Muna Kea April 9, 10 and 11. Snow measurements taken on Muna Loa April 15, after much of the snow had melted, showed 6" at 11,000 feet, 12" at 12,000 feet and an estimated depth of two feet at the summit. Weather was unusually rainy, with no clear days reported. Total precipitation at headquarters was 11.28", at Halemauila, 6.6", at the Halemauila observation station 9.2" and the Haleakula ranger station 8.94".

100 - Administrative

110 - Superintendent's Special Activities

The entire month was spent at headquarters, making routine inspections of headquarters and the CCC camp. On the 21st he attended the regular
quarterly dinner and meeting of the Federal Business Association in Hilo. On the 4th he was a guest speaker at a meeting and dinner of the Hawaiian Civic Club.

120 - Park Inspections

On the 11th Jack Moshkovitz, Principal Highway Engineer of the Bureau of Public Roads in the Territory and James Yap, Resident Territorial Highway Engineer, arrived for the purpose of inspecting the proposed realignment of the Hamakua Highway through the Footprint area. He was accompanied on this inspection by the superintendent and chief ranger.

140 - Status of Private Lands

Copy of a deed, dated April 13, was received from the Territory, transferring the 1.90 acres of private land in the Lava Tube area to the Park Service, which had been acquired by the Territory from the James Campbell Estate. This transfer completes acquisition of the 20 acres at the Lava Tube, though the Territory has not yet transmitted deed to the adjoining land acquired from the Shipman Estate.

150 - Plans, Maps and Surveys

The Territory, under agreement with the Bureau of Public Roads, started the survey for the reconstruction of the section of the Hamakua Highway through the Footprint addition to the park.

160 - General Publicity

Copy for the Volcano Letter for the first quarter of 1939, printing of which has been taken over by the University of Hawaii, was sent to the printer.

The Hilo Tribune-Herald carried an editorial on the 12th congratulating the CCC on its achievements during the past year.

200 - Maintenance, New Construction and Improvements

220 - New Construction

CCC - Construction of a trail from the 1840 lava flow, near Napau crater to some outstanding lava tree specimens north of that crater was started. The boundary trail along the Alaluen ranch to Halepe, under construction by the CCC, was 95% complete at the end of April; the foreman on that job doing an excellent piece of work. Work was started on coconut planting and 54 coconuts planted at Halepe, replacing those which had died. The job will cover planting of about 600 trees. Work was started on the tennis court and minor road improvement - job No. HAW-M-9 - at the rear of the Volcano House. On April 25, E.S. Mollenhoff, formerly of SP-3, Custer State Park, South Dakota, entered on duty as senior landscape foreman. Dr.
Joseph Sowers, the CCC part-time physician for the Haleakala section, died on March 25, after an illness of several months. During April, 33 boys were enrolled and 24 discharged; 14 honorable, 6 because they were needed at home, 7 expiration of term of service and 1 secured permanent employment. There were 10 dishonorable discharges for refusal to work. There was a total loss of 136 man days due to sickness, a 50% improvement over March, and 462 man days due to bad weather. An average of 124 enrollees were released to the project superintendent during the 32 working days. A total of 3083 man days was used on the various projects. There were 126 man days lost due to sickness, a 50% improvement over March, and 462 man days due to bad weather. An average of 154 enrollees were released to the project superintendent during the working days. A total of 3083 man days was used on the various projects. There were 2 minor accidents. At the Haleakala sub camp, the foreman reports 356 man days worked, with a loss of 46 days because of bad weather. There were 38 man days lost due to sickness and “conditioning”. The fourth employee's residence under construction was 50% complete and the foundation of the fifth poured. At Haleakala the cottage for the ranger was 20% completed. Two foremen from the Kilaeua section were transferred to Haleakala to do the electrical and stone work on this house.

240 - Improvement of Approaches to the Park

Construction was started, under Territorial supervision, of the realignment and straightening of that section of the Mamalahoa highway between Pahala and Honopu.

300 - Activities of Other Agencies in the Park

330 - Cooperating Governmental Agencies

Rangers Schuls and Haxter have been assigned part of the routine duties of the Volcano Observatory, including changing seismograph records, measuring earthquake cracks, etc. These assignments were necessitated by the fact that the employees hired by the Hawaiian Volcano Research Association were granted 60 days leave in order to obtain other employment as the association is no longer able to pay their salaries.

340 - Legislation Affecting the Park

The Territorial legislature adjourned without taking any action toward acquiring privately owned land in the authorized Kalapana area. The superintendent spent considerable time during the month in personal contacts and correspondence with the Governor and others on the matter and it is believed it will be worked out eventually on the basis of exchange.

The Territory’s biennium appropriation bill carried an item, under the University of Hawaii, providing for the establishment of a position of volcanology to be filled by Dr. Jaggar in the event he does not receive an indefinite extension of his present appointment as volcanologist in Hawaii National Park.

A bill introduced by Representative Carvalho of this island, providing for complete protection for a number of native birds, and additional protection for certain migratory game birds, passed both the Territorial House and Senate and it was expected the Governor would sign it shortly.
A bill was also introduced in the Territorial legislature memorializing Congress to amend the Organic Act to prohibit further exchanges of public lands. The fate of this legislation is uncertain and we have been unable to secure complete information.

400 - Interpretation

410 - Lecture and Guide Service

The ranger staff and Acting Assistant Park Naturalist Schulz continued to carry on the regular informational program. The following groups were given especial attention: 157 Girl Scouts, 76 Japanese school children, 14 persons from the Keanae CCC Camp on Maui, 268 officers and men from the Japanese naval oil tanker Shiriya Maru, and 115 members of Navy families and crew of the USS Beaver. Ranger Olson gave illustrated lectures on Hawaiian birdlife at Kilauea Military Camp to an audience of 206 and Pahala school to 573 persons.

430 - Research and Observation

432 - Zoology: On the 13th a colony of from 7 to 13 omo (Phaeornis obscura), Hawaiian Tnhush, was discovered near 5,000 foot elevation on Mauna Loa by Ranger Olson. This bird is rare in the park and the discovery is considered important as the CCC technician searched for it without success both in and near the park. Positive identification was made and it may later be found that more than a dozen or so inhabit this locality, probably throughout the year. The omo is considered a valuable spreader of native forest trees and in addition is a good singer.

433 - Geology and Volcanology: A slight earthquake was felt strongly in Hilo on the 12th, another slight shock was felt in the park on the 5th and distant earthquakes were recorded April 5 and 29. All but 5 of the local shocks of the month were from Kilauea; 4 probably Mauna Loa and 1 Hualalai. Slight movements occurred at measured cracks near Chain-of-Craters road of 0.5 and 1.0 mm. Dr. Jaggar increased concentration on writing and illustrations of the "Crater" monograph. A conference with "B." Belcher of the US Engineers was held on the 10th, and an additional memorandum sent Major Bernal of the Engineers on the lava barricades for Hilo. While in Honolulu on the 17th and 18th a conference was held with the President of the Research Association, also one with Dr. Ballard of the University of Hawaii. Dr. Ballard showed the new Gaertner spectroscope recently purchased by the park, which is being tested, and excellent photographs of gas spectra are being made with it. Assistant Geologist Waesche built and put into operation a rectifier utilizing the regular electric power current for the operation of the pit seismograph time from the Observatory time-piece. During the last week of the month he instructed Rangers Schulz and Winter in regular seismograph and shop routine. There were approximately 30 visitors at the Volcano Observatory in April.

434 - Archaeology: A short paper on Hawaiian Ads Materials, written by Acting Ranger in Charge of the Haleakala Section, Dr. R.A. Powers, was read at the meeting of the Hawaiian Academy of Science on the 28th.
500 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

There were 11,311 visitors at the Kilauea section, as compared with 15,327 for April 1939, a decrease of 4,016, which is due partly to poor weather conditions and the marked drop in sugar prices. At Haleakala there 2,610 visitors, as compared with 2,800 for April, 1938.

520 - Visitors

April 1 - Mr. and Mrs. Clive Davies and daughter, of London. Mr. Davies is associated with Theo. H. Davis Company, Ltd., general sugar factors in the Territory, a British-owned firm.

April 8 - Count Theo Rossi of Italy (Martini & Rossi vermouth) and Sr. T. Montanari, Italian consul for the Territory, for one day.

April 15 - Dr. and Mrs. Volney Wilson of the University of Chicago, four days. Dr. Wilson is assistant in cosmic rays at the University of Chicago and also connected with Dr. Compton's Chicago Laboratory of Physics.

April 25 - Dr. Lee Page of the Yale University Physics Department, visited the Observatory.

600 - Protection

610 - Ranger Service

Word was received that J.A. Pack, former ranger in charge of the Haleakala section, who left for the mainland on annual leave in February, entered on duty at Sequoia National Park, effective April 16.

On the 13th a 24-hour watch was kept at the park switchboard in aiding the local police in connection with a shooting which occurred at Pahala. A Filipino shot and wounded his former wife and a plantation policeman and then escaped into a canefield and it was thought he might work his way toward the park boundary. However, he committed suicide.

620 - Wildlife Protection

Fifty eight wild goats were destroyed at Kilauea and 18 at Haleakala.

640 - Forest Fire Protection

Two talks were given at the CCC camp in connection with the handling of grass fires and fire fighting equipment.
Building Fire Protection

The regular quarterly fire inspection of all buildings in the park was made the early part of the month. One fire drill for rangers was held, for the purpose of acquainting them with equipment, hydrants, tanks, valves, etc. Two talks on building fire control were made at the CCC camp.

Insects and Tree Diseases

Three soil samples were transmitted to the USDA Experiment Station in Honolulu for analyses to determine factors governing tree mortality at Pauahi crater and to ascertain if the soil on the grass slopes of Mauna Loa is suitable for natural native tree reproduction.

Public Health

The regular quarterly sanitation inspection was made of the operator's food handling facilities. The old garbage dump at Kealamakoi crater was discontinued during the month and cleaned up. Garbage disposal is now made at the park incinerator, recently completed by the CCC.

Edward G. Wingate
Superintendent
### STATISTICAL REPORT NO. 8
### FINANCE AND ACCOUNTS
### APRIL, 1939

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Appropriations</th>
<th>Allotted</th>
<th>Expended &amp; Obligated</th>
<th>Balance</th>
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<td>148/91000</td>
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<td>National Park Service, 1938</td>
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</table>
Lava tree at end of trail from Napeu Crater, constructed by CCC, job HAW R-5
Triangulation station at Pali Kūhūhau, on Chain-of-Craters road.

Close-up of same station.
Third set of quarters completed at Kilauea by CCC, project 308.

Fourth set of quarters under construction by CCC at Kilauea, project 308.
CCC Project No. 309 - Employees quarters, Halsekala section
# Travel Report

**Kilimanjaro Section, Hawaii National Park for the month of April, 1933**

<table>
<thead>
<tr>
<th></th>
<th>This Month</th>
<th>This Travel Year To Date</th>
<th>This Month</th>
<th>Last Travel Year To Date</th>
<th>Increase for Travel Year</th>
<th>Number</th>
<th>Percent</th>
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<tbody>
<tr>
<td><strong>Total persons entering via private transportation</strong></td>
<td>10,702</td>
<td>77,650</td>
<td>14,656</td>
<td>89,986</td>
<td>-12,336</td>
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<tr>
<td><strong>Total other transportation</strong></td>
<td>609</td>
<td>3,007</td>
<td>671</td>
<td>4,603</td>
<td>-796</td>
<td>.173</td>
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<tr>
<td><strong>GRAND TOTAL ALL VISITORS</strong></td>
<td>11,311</td>
<td>80,657</td>
<td>15,327</td>
<td>94,589</td>
<td>-13,132</td>
<td>.139</td>
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</table>

**Private Transportation:**

- Cars first entry
- Cars reentry
- Motorcycles
- Total motor vehicles
- Persons entering via motor vehicles
- Persons entering via other private transportation
- Total persons entering via private transportation

**Other Transportation:**

- Total other transportation
- Persons entering via trains
- Persons entering otherwise
- Total other transportation

**Grand Total All Visitors:**

- Automobiles in public camps during month
- Campers in public camps during month
### TRAVEL REPORT

**Maalahala Section, Hawaii** National Park for the month of **April 1939**

<table>
<thead>
<tr>
<th></th>
<th>This Month</th>
<th>This Travel Year To Date</th>
<th>This Month Last Year To Date</th>
<th>Increase for Travel Year</th>
<th>Number</th>
<th>Percent</th>
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<td><strong>PRIVATE TRANSPORTATION:</strong></td>
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<tr>
<td>Cars first entry</td>
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<td>3605</td>
<td>560</td>
<td>2329</td>
<td>1276</td>
<td>54</td>
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<tr>
<td>Cars reentry</td>
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<td>Motorcycles</td>
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<tr>
<td>Total motor vehicles</td>
<td>522</td>
<td>3605</td>
<td>560</td>
<td>2329</td>
<td>1276</td>
<td>54</td>
</tr>
<tr>
<td>Persons entering via motor vehicles</td>
<td>2610</td>
<td>19025</td>
<td>2800</td>
<td>11645</td>
<td>6380</td>
<td>54</td>
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<tr>
<td>Persons entering via other private transportation</td>
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<tr>
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<tr>
<td>Persons entering via trains</td>
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<tr>
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<table>
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<th>Increase</th>
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<tr>
<td>Automobiles in public camps during month</td>
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</table>
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAI'I

May 4, 1939

MEMORANDUM FOR THE SUPERINTENDENT:

SUBJECT: Chief Ranger's narrative report for April, 1939.

020. A snowfall on Mauna Loa on the nights of April 9,10,11 was regarded by old-timers as unusually heavy, although the snow did not reach an exceptionally low elevation. Measurements taken April 13, after the bulk of the snow had melted showed 6" at 11,000, 12 at 12,000 and an estimated depth of 24" at the summit.

Weather during the month was considered unusually rainy with no clear days reported. Rainfall in the headquarters area was 11.03", OCO Camp 12.10", Halemaumau 8.60" and 12,600 and 12,000 at Mauna Loa 8.75".

150. A survey was completed by E. R. R. for the new road through the footprints park addition.

160. Work was started by this division on a Road and Trail Guide folder for general distribution.

220. Construction of a trail was given by the CCC from the 1940 flow near Halema'uma'u to some outstanding lave tree specimens north of that crater. The boundary trail along Maunau Ranch to Halepe was completed. Foreman Rains done a fine job on this trail, 54 coconut plants were planted at Halepe, replacing those which had died. Work was started on the construction of a tennis court at Volcano House by CCC.

240. Construction was started on the realignment and straightening of the Belt Road between Pahala and Honokaa.

The survey of the new road through the footprints area was continued outside of the park boundary by N.P.R. to the section of road realigned and paved in 1934.

410. The rangers continued to do all lecture and guide service throughout the month and conducted all regular and special tours through the park.

450. Reported by ranger Schuls.

432. * * * Olson.

520. Mr. James Yap, Territorial Engineer, Honolulu.
Mr. J. Marksmitz, Bureau of Public Roads, Honolulu.
Mr. E.E. Telli}, CCC Field Supervisor, Honolulu.
Mr. & Mrs. W. Elyod Mitchell and son, Chmn of Bd. of Dir., Chrysler Corp.
Dr. & Mrs. Wilson, Northwestern University, Chicago.
Mr. & Mrs. Albert Judd, Trustee of Bishop Museum, Honolulu.
Dr. Homer F. Barnes Principal of Kamehameha Schools, Honolulu.
115 Officers and families of U.S.S. Beaver.
Officers and men of Japanese tanker Umitya Maru.

620. A 24 hour watch was kept at the park Switchboard on April 13 in aiding local police in connection with a shooting at Pahala. Regular daily patrols were made of all park roads and 4 trips were made to the Seacoast area, 2 to Great Crack area, 4 to Mauna Loa and 4 to Kapinga Crater.

630. During the month 56 goats were destroyed in this section.

As several rolls of wire and some posts are now available from CCC it is proposed that a small could be constructed at 6 tanks and a small goat drive by rangers be held to eliminate the goats still found in the Mauna Loa fenced area. The number of goats known to still exist here is about 50 and shooting of these is not advisable due to cattle in the vicinity.

640. Two talks were given at CCC Camp on handling grass on forest fire fighting equipment.

A telephone was installed at CCC Camp on handling grass on forest fire fighting equipment.

650. A quarterly fire inspection of all buildings in the park was held early in the month. One fire drill for rangers was held, acquainting them with equipment, hydrants, tanks, valves, etc. Two talks on building fire control were made at CCC Camp. The grass was cut around the park warehouse and nearly buildings to eliminate the fire hazard.

660. Soil samples were transmitted to Dr. Hance of H.S.P.A., Honolulu, for analysis to determine factors governing tree mortality at Pauahi Crater and to ascertain if the soil on the grassland slopes of Mauna Loa is suitable for natural native tree reproduction.

670. A sanitation inspection was made of the park operators' food handling facilities during the month.

The old garbage dump at Keanakako'i Crater was discontinued during the month and cleaned up. Garbage disposal is at present made at CCC incinerator.

Joseph M. Christ
Chief Ranger
MEMORANDUM TO THE SUPERINTENDENT THRU THE CHIEF RANGER:

Subject: Narrative report for April.

A. Work accomplished;

During the month of April I was assigned as Patrolling Ranger for the Emu District. Routine patrol was accomplished and 8 complete circuits of the Kipuka Puaulu fence line were made during this time. I took my regular turn at Flag and Switchboard duty, and changed the seismograph along with reading the rain-gage at the end of the Mauna Loa truck trail on my routine patrol trips.

The traffic counters were overhauled and placed in operation on April 6 at 18:00 Noon. One instrument was placed on the Rim Road just South of the junction with the Hilo Entrance Spur, and the other South of the Waiakahuna junction. Several checks have been made and they are working properly. I have also assisted Ranger Minter in designing a much simpler unit to be made out of materials on hand.

I have conducted 2 Kipuka Puaulu field trips, 1 General Park tour, 1 Short tour, and assisted Ranger Olson in the handling of the group from the U.S. Beaver for a total of 101 contacts during the month.

A number of pictures were taken during the month of the following objects: Lava Trees in the Napau area, triangulation station at Puu Risibula, construction progress on quarters being built by the CCC organization, and specimens of Manake, Opuke, and Ohia Lehua from Kipuka Puaulu. I have also developed 2 rolls of film and will prepare the necessary prints for the monthly report.
On April 14 I accompanied Ranger Olson on a saddle horse trip to the 12000 ft. elevation on Mauna Loa where we investigated snow conditions. Repairs were made to the telephone line at Puu Uleula. Inspection was made of trail and telephone line conditions enroute.

On April 18th, I made a trip with saddle and pack horses to the 10000 ft. resthouse where I applied canes to the walls and repaired one window. The building was in good condition and we now have canes applied to 60% of the interior walls.

On April 25 I trailed the saddle horses from Kipuka Nene to the corral at Kipuka Puaulu. Inspection was made of trail conditions enroute.

On April 24 I accompanied Chief Ranger Christ on a trip to the Lava Tree area near Napeu Crater where we inspected trail construction and photographed some of the tree specimens.

On the 28th, I installed a telephone at the #2 Fire Cache above Six Tanks. New batteries were installed in the Office Switchboard, and in Dr. Jaggar's office phone at the Observatory. Ringer Units were repaired in the instruments located at the Museum and at Makoopuhi.

In accordance with a request from Chief Ranger Christ I have started a complete inventory of the telephone instruments within the Park. This project is approximately 50% completed. When it is finished, we will have a record of the serial number, location, make, generator size, and ringer coil resistance of each unit in our system. This will be kept up to date and will enable us to standardize our equipment in subsequent purchases of ringer coils and generators.

At various times during the month I have added 6 additional nature trail signs to our present arrangement at Kipuka Puaulu. These were placed at outstanding specimens of Mokoke, Ohia Lehua, and Alanawainui. I feel that several more are needed, especially in the Fern Group, for the proper guidance of Park visitors when not accompanied by a Ranger.

On Wednesday evening, April 26, I attended the Safety Meeting at the CCO Camp, and gave a short talk on firefighting methods and equipment.
B. Comments:

I feel that the CCC Organization should be requested to repair the road leading from the highway to the crusher at Namakani Pali. Due to continuous hauling over this section the outeredge of the pavement on the Mamalahoa highway is breaking away for about one foot toward the center of the road. This should be prevented by oiling a small strip or apron onto the surface of the approach road. In looking over the situation I understand that sufficient bitumene is available to do this small job.

We badly need a sign marking the point where our Footprint Area trail leaves the highway, and I am sure that this can be taken care of this month by our CCC sign project.

A number of goats have been observed in the Kipuka Kualalio and Giant Eas areas. Approx. 30 in number.

The Mauna Loa trail from a point just above the gate at the 7000 ft. level, to the more solid pahoehoe about 1/2 miles above, is badly washed and needs repair as soon as possible. Very dangerous for loaded pack animals.

C. Observations:

The Territorial Surveyors are working on the relocation survey of the Mamalahoa highway section from the old Ehu entrance to a point beyond the Halfway House. Necessary signals have been erected at the nearby triangulation stations serving this area.

On Wednesday, April 26, W. Ledyard Mitchell, accompanied by his wife and son, were visitors within the Park. They were contacted by me at the Museum and as their time was very short, they only saw Halemaumau and the Rim Drive, along with a portion of the movie being shown the group from the USS Beaver. Mr. Mitchell is chairman of the Board of Directors of Chrysler Corp., and was accompanied by Walter Klund, local manager of the Von Hamn Young Corp.

On Sunday, April 23, Mrs. Peyton, wife of Brig. Gen. Philip B. Peyton of Fort Schofield was a member of the group taken on the Mauna Loa tour. Mrs. Peyton is a guest at the Kilauea Military Camp.

Signed: Arthur L. Jess
Park Ranger.
United States
Department of the Interior
National Park Service
Hawaii National Park
Hawaii

May 12, 1939

Report of Camp Director Frank C. Huston, CCC ENP to Superintendent Edward G. Wingate, Hawaii National Park, for the month of April, 1939.

During the month we enrolled 33 boys and discharged 24. 14 honorable, 6 needed at home, 7 expiration of term of service and 1 secured permanent employment. 10 dishonorable for refusal to work.

There was a total of 126 man-days lost due to sickness. This was an improvement of 50% over last month.

Two safety meetings were held during the month attended by all the camp. Mr. Christ the Chief Ranger of the Park and Ranger Jess gave a talk on fire and fire prevention.

The safety assistant report shows all safety regulations are being carried out.

The Project Superintendent's report shows a daily average of 154 enrollees released to him during the month of 20 working days. A total of 3083 man-days on the projects.

There was a loss of 462 man-days due to bad weather.

There were two minor accidents with a loss of 5 man-days.

240P Planting, Volcano House:

900 man-days used on this project.

250P Removal of Exotics:

83 man-days used on this project removing exotics along the rim road.

305 Prep. & Transp. of Materials:

233 man-days used on this project.
308 Camp Construction: Construction of Personnel Cottages:

Cottage No. 1 40% complete and foundation of cottage No. 5 concreted. 789 man-days used on this project.

R-3 Boundary Trail:

381 man-days used on this trail which is now 95% complete.

Work continued on some 11 other projects in the park.

The recreational activities continued during the month.

E. S. Mollenhoff, Landscape Foreman, arrived at this camp on April 25th from Custer State Park No. 3, South Dakota.

The doctor and dentist made their regular weekly trips during the month. Dr. Phillips placed a quarantine on this camp as a preventive measure to keep the enrollees away from whooping cough.

Haleakala Section, Hawaii National Park
Maui CCC Stub Camp:

The foreman reports 356 man-days worked on projects with a loss of 15 day due to bad weather. 38 man-days lost due to sickness and conditioning.

The ranger cottage is 20% complete.

Foreman Maka and Markiewitch transferred here from the main camp to do the electrical and stone work.

Dr. Jones made his regular inspection of the camp and enrollees.

Respectfully submitted,

Frank C. Huston
Camp Director
CCC BNP
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

Memorandum to the Superintendent,
Through Chief Ranger

Narrative report for April 1939.

Minter

Was assigned to the seacoast area for the past month, and
have spent as much time as possible in exploring the district and
destroying goats. Killed 31 goats during the month.

Drove over the so-called road from the great crack to the
end just above the south boundary fence, and looked over all the
fence I could, but was handicapped account of heavy rain.

With Chief Ranger Christ, covered the boundary trail to Halape, and stayed over-nite at the CCC Camp there. Christ and I, between us accounted for five goats that day. Covered the lower flat area between Halape and the Hilihi Pali shelter the next days and killed nine more goats enroute to the Pali.

The trail from the foot of the Pali, under the shelter, should
be more clearly marked, both to Halape and then to the new trail to
Halape. This merely necessitates the erection of small markers
sufficiently close to mark the route. The trail down Hilihi Pali
under the shelter should be re-located, with a little-less strenuous
grade, as in its present condition it is quite dangerous to horses
in descending, and owing to the heat, quite exhausting in ascending.

Approximately 125 goats were seen below the Pali.

The last week of April was partly spent in learning the
routine work to be followed at the Observatory, preparatory to the
resignation of Mr. Yasunaka.

Considerable time was spent in designing and partly constructing
a simpler traffic counter. The major part of the work is finished,
with a few "bugs" yet to be ironed out before a practical test can be
made. Ranger Jess and Mr. Weasche have both helped with suggestions
in the planning of the counter.

Have also spent considerable time and thought to the improvement
of the seismograph mechanisms in use and have submitted these ideas to
Doctor Jagger.
I am making a list of machine shop equipment and supplies to be submitted hopefully thru Dr. Jagger. The material list will be small and should be acquired as soon as possible to facilitate a very much needed improvement on the Mauna Loa seismograph and the same improvement on the proposed Haleakula instrument.

The following are tours and hikes for the past month:
Two general park tours, 95 people; one Interisland tour, 24 people; one Mauna Loa tour, 19 people; one bird park tour, 19 people; one showing of Krakatoa, 101 people. Assisted Ranger Schulz with one park tour, with 100 people.

Two mornings were spent in assisting Ranger Jess on trip to Mauna Loa, and went after him in the afternoon. Brought the horses from the Truck trail end to Bird Park corral on the 19th.

Participated in fire drill, on the 20th, and made quarterly fire inspection of the Volcano House, report being made separately. Fire inspection was also made of the Park utility buildings and the private dwellings in the park area. Also assisted in repainting the 35 MPH signs to read "40 MPH".

Was off two days sick with a bad cold.

Approximately two days were spent on inventory of small tools paper work.

Surveyed worn out equipment and supplies at the CCC Camp.

Suggest that a directional sign with arrow "Freshish water" be installed at shelter at Ralape pointing to water in a crack some little distance from the shelter, and a conspicuous "Water Hole" sign be placed at the water hole.

John E. Winter
Park Ranger.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII
April 20, 1939

MEMORANDUM TO SUPERINTENDENT WINGATE

THRU CHIEF RANGER CHRIST

SUBJECT: Ranger Report for the Month of April (Schulz)

Assigned Duties and Work Accomplished:

Designated as patrolling ranger for the Headquarters Area.

Flag custodian for April 1 to 8 inclusive, and on 24 hour duty for that period. From 8 to 11 PM on April 2 was spent with Chief Ranger Christ looking for three "lost" soldiers along the Hilina Pali road and bluff.

On April 2 Rodehard exposures were made on the Shipman Ranch of the flock of names for the Wildlife Division.

Distributed the telephone directories revised and issued in March to all phones in my (Headquarters) area; field phones only.

Soil samples were secured at the request of Chief Ranger Christ from the Paushi NWR both where Ohias are dying and where they are flourishing.

Regular duties such as daily road patrols, occasional general park patrols, switchboard, posting and filing the weekly Kilauea Volcano reports, read and noted all official bulletins referred to the Ranger and Naturalist Divisions for their information, etc.

As Acting Assistant Naturalist, the naturalist filing and correspondence was kept up and several news releases were issued, also the museum display cases were given the last of their three coats of white paint. Museum cataloguing, and general cleaning of the projection room and closets were continued in all available spare time.

During the last week of the month, instruction was received from Seismologist Uchida and his assistant Yasumoto of the Volcano Research Observatory in the routine care of the instruments, in the changing of records, and in the gathering and reporting of meteorological data.

The larger rocks in the Museum parking area were raked to avoid tire bruises, and the "flower" beds were further weeded and trimmed with the aid of the two CCC Museum Attendents. The general appearance of the Museum is now quite presentable.

The inaccuracies noted by the undersigned in the monthly Ranger Report for February 1939 on the Halemaumau shrine map and on the "Devastation" sign nearby were corrected.

Trails patrolled and policed (by foot) were:
- Kilauea Crater trail, twice
- Soldiers' trail
- Sandlewood trail
- Steaming Bluff trail to Uwekahuna
The completed 12 mile Kilauea Rim Bridge to Hapuu and new LavaTees trails
Kilauea Iki trail
Summer Camp-Byron Ledge trail
Seventy-five letters each two to seven feet high composed of rocks laid on the smooth fault zone drop blocks below Uwekahuna Museum were obliterated. The letters had presumably been made largely by soldiers. If the energy involved in collecting, placing, and then finally in tossing away the 1500 or 2000 rocks could have been put to some worthwhile purpose it would have been desirable to say the least!

One meeting of the Camera Club of Hilo and the monthly "Manu Iki" or Bird Club were attended, the latter officially.

The April 16th showing of the Krakatoa film was introduced, and several special "Eruption Movies" and lectures were made at the Museum totaling 10 for 1128 park visitors. Several special short Park Tours and special hiking trips to Kipuka Puuhi, across Kilauea Crater, and thru the Thurston Lava Tube were made with visiting groups.

Comments:

It is suggested that the toilet flushing mechanisms including the seating of valves and washers at the Lava Tube comfort stations be carefully checked. Twice this month the water storage tanks were found more or less completely empty. Also certain toilet (individual) tanks at times fail to fill completely thus failing to flush the bowls completely.

At an informal staff meeting in February it was decided that police whistles should be provided as the most effective means of attracting attention of parties in the course of our ranger activities. This seems very desirable.

At Uwekahuna Museum the projection room is now kept locked, one key being cached on the ledge above and to the right of the door in question. In view of the fact that some visitor about a month ago sat on the relief map of the Island of Hawaii and produced an unsightly crack and small depression in the Pacific Ocean it would seem advisable to have a small nest railing built around the model. Twelve vertical cleats, marked with chalk, on the museum display cases are loose and might well be tacked securely in place.

I take the liberty again of suggesting that the dumbbell shaped lawn plot in the Uwekahuna parking area proper be cut. At present grass is about one foot high but otherwise in fairly good condition. Regular cutting of the plot would improve the appearance of the area.

It is realized that the roads and trails committee has a real task on its hands and that some signs have been ordered. However with hiking becoming more frequent as the spring season progresses it is urged that at least some crude temporary signs be posted where there are none at all, leaving the unguided hiker at a loss to know where he is. Such points as the undersigned has in mind are at the Kilauea IMAX Rim and the Chain of Craters (intertwined) trails, the Kilauea Rim trail and the Chain of Craters road, marking the trail (a segment of the Rim trail) taking off to the SE from the Volcano House. In looking for the latter it was found to be impossible to locate this leg of the trail and was
necessary to go down the road towards Hilo and learn that way where it lay behind the Volcano House. The continuation to the Sulfur Bank can be found, however by following a sign "To The Forest". Also at the Sulfur Bank there is no sign what so ever. Similar situations may exist at other points of which I am not aware.

Except as noted below all of the trails traversed may be said to be in good or very good condition. 

Thurston Lava Tube Trail excellent except for one bad short-cut between the point where the sailor fell thru and the last leg of the zig-zag encountered in descending into the First Twin Crater. It is suggested that the CCC dig up this barren packed strip and that Hapuu and the like be planted. It should not require more than a dozen plants.

Kilauea Iki Trail is good but at several points along the descent from the Lava Tube end there are short-outs which can quite easily be remedied by the placing of some substantial but inoffensive barriers along the trail at these points. Large rough pieces of lava, a down piece of this or tree fern would do nicely.

On the Kilauea Iki Trail a mile or so after leaving the Chain of Craters Road crossing on route to the Volcano House via the Lava Tube, at frequent intervals sections of the trail up to twenty-five feet in length are a morass of gooey mud. Some coarse crushed rock possibly even with some finer on top would remedy this situation. It would involve quite a bit of work, but this very beautiful trail would surely be enhanced by making it much more easily negotiable by the average tourist hiker.

The kerosene water heater at the Schulz residence was promptly and efficiently put into satisfactory operating condition by Kawasaki.

Time Off:

The "days off" for the undersigned numbered five in all, as follows: April 2, 6, 16, 23, and 24.

Fauna and Flora:

On April 13th the Koleas were suddenly noticed to be in almost full summer plumage. From that time on it seemed that these birds were somewhat more gregarious in habit than before. Frequent patrols thru the same area gave an opportunity to observe that about the 20th of the month the number of Koleas present was rapidly decreasing. Two were seen almost daily before, none were seen after April 26th. It is assumed, then that for all practical purposes, the Koleas left the middle elevations of Hawaii National Park for Alaska between the 20th and 26th of April, this year.

During the past two months many opportunities have presented themselves to clock the Koleas with automobile speedometers. The conclusions reached were that the normal maximum speed of the birds when frightened is 35 miles an hour with 40 miles being top speed for certain individuals. The normal "cruising" speed when foraging in the grass and brush lands seems to be about 25 miles an hour.

It is disheartening to see the destruction wrought by the pigs in the beautiful wet forest of the Lava Tube vicinity.
Even tho the pig has possibly been here for 130 years, the fact remains that as far as native vegetation goes, the pig is an undesirable introduction by man. While the pig no doubt played an important role in the lives of the Hawaiians, that relation does not exist today, and since it is one of the many introductions at the least desirable end of the list as far as the present day wildlife setup in Hawai‘i National Park, it is my opinion that the pig should be persecuted to the same extent as the goat, now that the "goat crisis" is over.

Respectfully submitted,

Paul Ernest Schulz
Park Ranger
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
HAWAII NATIONAL PARK  
HAWAII  
Wailuku, Maui  
May 1, 1939

Memorandum to Superintendent E. G. Wingate  
through office of Chief Ranger.

Enclosed are the weather reports, narrative report,  
half-month and monthly travel reports for the month of April 1939.

The Ranger report is omitted in accord with instructions  
from Chief Clerk dated April 1, 1939.

H. A. Powers  
Acting District Ranger
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII Waikanae, Kauai
May 1, 1939

Memorandum to Superintendent E. G. Wingate
through office of the Chief Ranger:

The following narrative report of the Haleakala Section
for the month of April 1939 is respectfully submitted:

O00 General

O01. Introduction. The Ranger Quarters is rapidly beginning to
take shape and look like a house. Foreman Janiak is
proceeding carefully and taking pains to see that the
workmanship is of as high a caliber as can be attained.

O02. General Weather Conditions.
Moderate trade wind conditions prevailed through most of
the month. Kona weather prevailed from the second to the
ten but with only one day of strong wind on the fourth.
At Pakanoa Observatory there were five days entirely clear,
and only nine cloudy days. Small sleet storms accompanied
the Kona on April 6 and 7. Total rain was 9.20 inches.
At the Ranger Station there were six days of drizzle and
complete cloudiness, and four entirely clear days. A
few claps of thunder were heard in the afternoons of the
9th and the 26th. Total rain was 8.94 inches.

Rainfall at the three stations which are read daily is
summarized as follows:

<table>
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<th>Period</th>
<th>Ranger Sta.</th>
<th>Intake</th>
<th>Pakanoa</th>
<th>Kona</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr. 1-10</td>
<td>6.21</td>
<td>7.70</td>
<td>6.03</td>
<td></td>
</tr>
<tr>
<td>Apr. 11-16</td>
<td>.44</td>
<td>.70</td>
<td>.10</td>
<td>Trade</td>
</tr>
<tr>
<td>Apr. 17-19</td>
<td>1.47</td>
<td>2.20</td>
<td>.82</td>
<td>Trade</td>
</tr>
<tr>
<td>Apr. 20-30</td>
<td>.82</td>
<td>1.00</td>
<td>.25</td>
<td>Trade</td>
</tr>
</tbody>
</table>

sub tot. trade wind rain - 2.73

Total rain - 8.94

170. The surveying for the proposed water system is about half done.

120. Park Inspections by
125. Haleakala Section and the CCC projects were inspected by
Camp Director F. C. Homan during the week Apr. 10 to 14.

150. Equipment and Supplies.
Received from headquarters one pair maximum and minimum ther-
ometers on Apr. 27.
Received from headquarters eight pkgs. of Park booklets on
Apr. 27.
Received 1 second hand steel tank for CCC fuel oil stove, Apr. 28.
200 Maintenance, Improvements, and New Construction.

230. New Construction.
On the Rangers Quarters, the walls (studding, plate, and sheathing), rafters, purlines, and foundation for fireplace have been completed. The trenching in the basement for the drain pipes and plumbing has been completed. The electric wiring has been started, and the mason gang is cutting stone for the fireplace.
About one and a half miles of the new trail connecting the Park entrance to the Halemaumau Trail has been finished in the rough.

500 Use of Park Facilities by the Public.
510. During April, 522 cars entered the Haleakala Section compared with 560 during April of 1938, and with 327 during March of this year. Heavy travel during April of last year was due to a snow fall, which probably explains the decrease of 5% for the month from last year's travel. This month shows an increase over last month of 6%.
540. Fifteen persons spent one night each at Kapalaoa cabin in the crater, and 3 persons spent one night at the old Rest House. The Kona storm during the week preceding Easter Sunday upset the plans of several other parties who had planned to camp in the crater.

600 Protection.
640. Eighteen goats, including eleven billies and 7 nannies, were destroyed in the Park during April. One of the nannies had three kids, of which two also were female. Their demise should make a noticeable effect on the future rate of increase.

900 Miscellaneous.
Ranger Powers made a short talk on the Origin of Haleakala to the Maui Rotary Club at its meeting of April 5.
A short paper on the Hawaiian Adz materials in the Haleakala Section of the Hawaii National Park, written by Powers, was read by Horace Winchell at the meeting of the Hawaiian Academy of Science on April 28.

H. A. Powers
Acting District Ranger
MEMORANDUM FOR THE SUPERINTENDENT (THROUGH THE CHIEF RANGER)

Subject: Rangers' narrative report for April, 1939, (Olson)

Several field trips were made with Mr. Albert Judd of Bishop Estate and Mr. Wee Ewart, Bishop Estate Forester, into the lands directly adjacent to the park. Their intent to open certain of these lands for lease and house-lot settlement was communicated to the Chief Ranger early in the month.

One day was spent making notes on and reading Superintendents reports.

A trip was made to Haleape with Mr. Christ and Mr. Rennie on Apr. 10. 3 goats were killed at Haleape at this time.

A trip was made to near 12,000 elevation on Mauna Loa on Apr. 13, with Mr. Jess to determine the depth of the snow. This depth was 6" at El. 11000, 12" at El. 12,000 and estimated to be 24" at the summit. Some drifts at El.12,000 were found to be 3 feet or more in depth making travel very difficult for the horses and necessitating our turning back at this point.

The trail below 9000 feet is badly washed out and in need of reconstruction. The telephone line above 11,000 ft. is in need of extensive repairs. The chief trouble with this line is the poles being spaced too far apart and not properly anchored cause the copper wire which does not have sufficient tensile strength, to break between the poles when loaded with snow and ice. Similar damage was found and reported one year ago after the 1937-38 winter. As its present use is negligible, I do not believe repair to this line would be advisable unless reconstruction is anticipated and in such event it should closely parallel the proposed motorcycle trail. This would make for convenience of patrol and maintenance.

One Inter-Island tour was conducted during the month with a total of 8 cars and 30 persons. A tour was conducted by Mr. Jess and myself for the officers, men and families of the USS Beaver with a total of 15 cars and 113 persons.

My assignment during the month was special duty so that most of the time was spent on office work. A Road and Trail Guide circular was general circulation was prepared. A fire hazard inspection was made at CCC Camp. A fire drill was conducted for the new rangers and they were acquainted with fire-lines and equipment. The fire-pump was found to be in need of repairs, same being reported to the Chief Ranger. Work was started on the preparation of a report and recommendations for the concurrence of the Exotics Committee.

WILDLIFE ACTIVITIES.

On May April 3, a slide-illustrated bird talk and a showing of the
Haleakala film was held at the Military Camp; attendance 205. On Apr. 14, a bird talk was made at Paliwai School to teachers and students; attendance, 573.

6 rolls of Kodachrome transparencies of bird subjects from Bishop Museum were transmitted to the Western Museum Laboratories for mounting and titling. 6 bird trays were ordered from WML to be used in trapping mongoose.

Considerable bird research was conducted during the month, most of this being done on off duty time.

The regular meeting of the Manuiki Society was attended and a resolution was backed and letters transmitted to Senators and Representatives of this Island and several bird societies on Oahu, stating the clubs feelings on the legislation affecting the Kalapana addition and protection for several of the birds now considered as game birds.

BIRD OBSERVATIONS.

2 kolea were seen at Halape, Apr. 10, one flew shoreward from Koai Xi., and one was seen feeding along the shore near the coconut grove. This is mentioned as it is unusual to see kolea near the shore in this district during the middle of the day.

On Apr.13, a colony of from 7 to 13 omo, (Phaeornis obscure) Hawaii Thrush, were discovered near 819,000 feet on Mauna Loa. This bird is rare in the park and the discovery is considered important as Paul Baldwin searched for his bird without success both in and near the park. The location which they appear to frequent is especially interesting as this bird is authentically reported to frequent the Napeo Crater locality. The omo subsists upon native berries and insects, both of which would appear to be more plentiful farther down the mountain. The vegetation at this elevation is sparse and scrubby. Positive identification was made and it may later be found that more than the dozen or so seen inhabit this locality, probably throughout the year. Dropings were examined on several favorite perching places and many quite large seeds of pukeawe were found. The omo is considered a valuable spreader of native forest trees and in addition is a good singer.

2 Hua-mei, Chinese or spectacled thrush, were observed feeding in a Buddia bush near my quarters on the morning of Apr. 21.

The apapane and English sparrows appear to get along well together at this time of year. A male and female apapane and a male sparrow were seen on Apr. 21, for almost 20 minutes within two feet of each other in a tree, neither seeming to mind the others presence.

3 iiwi were seen in the koa and ohia forest above the horse corral on Apr. 26. One other, apparently an iiwi in juvenile plumage was observed with
binoculars at fairly close range. Its coloring was of a greenish-grey, lighter underneath and with red only on the lesser wing coverts. It had, however, the large, curved and pink beak of the iiwi as well as the pinkish legs.

Two elepai'o appear to be nesting close to the Hui-o-Pele shelter at Lava Tube. I have seen them here at least 4 times during the past month. They are very tame and approach within arms length when called.

It was not possible to watch the kolea for their migrating date this year, but the last seen were the two which frequent the Chain of Craters-Kilauea Rim Road junction, which were last seen on Apr. 28.

As very little is known of the nesting habits of the Hawaiian birds and as this is the nesting season for most of the species in this area, it is suggested that birds seen with nesting materials be closely watched and if possible the nest site be noted so that accurate observations and possibly photographs as well can be made to record more of this important phase of our native bird life.

Gunder E. Olson, Ranger.

CC-Chief Ranger.
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FILE NO.

MONTHLY REPORT
MARCH 1939

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.

ARNO B. CAMMERER,
Director.
MEMORANDUM FOR THE DIRECTOR:

There follows the superintendent's narrative report for the month of March.

000 - General

C10 - Introduction

Conditions and activities were largely normal during the month in the park. An exceptionally heavy storm on March 2-3 set a record of 19.2" of rain in Hilo exceeding the previous 24-hour record by several inches. The rain, which amounted to 11.01", while exceeding the previous record by 1.3" in the park, caused no damage, except to the Hilinga Pali auto trail, which was badly washed out and several culverts destroyed.

The office staff was busy during the first part of the month preparing the 1941 preliminary estimate. Routine duties were increased due to the absence of the chief clerk and assistant to the superintendent. The rangers put into operation a program calling for more frequent and extended patrols into the outlying and coastal sections of the park, as suggested by the superintendent. As the park naturalist position remained unfilled it was necessary for the ranger staff to continue giving all lectures and nature guide hikes. In this they were assisted by Assistant Geologist Vaseche. In all, this informational work was conducted in an exceptionally capable manner.

The matter of permanent repairs to the Chain-of-Craters road is still undecided due to the fact that the ground movement in that region does not appear to have sufficiently subsided to warrant any sizable expenditure of funds. The road is kept open by temporary repairs by CCC labor and is posted as dangerous.

The superintendent spent considerable time during the last part of the month contacting interested individuals and organizations regarding acquisition of the privately owned land in the authorized Kalapana addition to the park. Following a conference with the superintendent, the Board of Supervisors adopted, on March 29, a resolution requesting the Territorial Legislature to pass legislation enabling the Governor to proceed with the acquisition. The Hilo Chamber of Commerce supported this resolution and favorable action was taken by the local branch of the Audubon Society. Because of the unfavorable sugar situation, reducing the tax receipts, the Governor and territorial officials have been emphasizing economy and favorable action during the present session of the legislature is doubtful.
General Weather Conditions

There was a heavy fall of snow on both Mauna Loa and Mauna Kea the first week of the month, both of these mountains remaining snow-capped to the end of the month. Total precipitation for the month was 29.85" at Kilauea and 6.68" at Haleakala. Maximum wind velocity at Kilauea was 20 mph on the 30th. During the period of heavy rain run-off water from the Kau desert was noted to have reached a height of 16 feet in some of the dry gulches near Pauuio Kipuka, resulting in much erosion of soil in places and sedimentary deposits in others, besides damaging the Kilauea Fali auto trail. Several large temporary ponds were formed on the floor of Kilauea crater at the southwest end.

Administrative

Superintendent’s Special Activities:

On the 23rd he spoke at a meeting of the Puna Civic Club, a non-partisan organization which has been recently organized by the citizens of this section, to stimulate interest in Puna district. In his talk mention was made for the need of the territorial legislature acting to acquire the private land in the authorized Kalapana extension to the park. The talk was report in full in the Hilo Tribune-Herald of March 30.

General Complaints

On March 30 a Miss Georgia O'Keefe, who is doing some art work for the Hawaiian pineapple industry in the islands, and was an overnight guest at the Volcano House, complained to the superintendent about treatment she had received by the park and hotel staff. Her complaint was heard by the superintendent and she was assured that an investigation would be made. This was done and the complaint found to be almost wholly unjustified, inasmuch as her refusal to stop at the park office to meet the ranger who was to conduct the party of which she was a member, which arrangement was clearly understood by the other members of the party, occasioned her missing him entirely. The party was therefore driven around the park by an uninformed chauffeur of the Volcano House. Miss O'Keefe's general complaint concerned cold rooms at the Volcano House, damp bedding, poor service on the inter-island boats, failure to enjoy her time on Maui, rudeness of the park rangers and total lack of information on the part of the boy who drove the car. Though requested to do so, she did not put her complaint in writing. Other members of the party, who toured the park with her later came to the superintendent and stated they understood they were to come to the park headquarters to meet the ranger who was to take them, but Miss O'Keefe insisted that a particular ranger with whom she had been talking the evening before was the one who was going to take them and insisted on looking for him elsewhere. Also, at no time were any of the park staff discourteous, but on the contrary did all they could to assist them. They also stated they had traveled to the islands with Miss O'Keefe and she had displayed an unceasing temper on several occasions, both on shipboard and during her stay at the hotel in Honolulu.
On March 19, it was necessary to write Mr. Stanley Kennedy, President and General Manager of the Inter-Island Steam Navigation Company, commenting on the conduct of his drivers in the park. The ranger staff had reported that several of the drivers had displayed unwarranted discourtesy to the government and employees of the Service, as well as visitors, by interrupting the hearing of the customary lecture and showing of informational moving pictures at the Waikukau museum, by sounding the horns on their cars; being very impatient to be on their way to Kona. Mr. Kennedy's reply to our letter assured us there would be no recurrence of this trouble, and stated he would cooperate to the fullest in assisting in making the portion of the visitors' trip through the park as interesting as possible.

200 - Maintenance. New Construction and Improvements

210 - Maintenance

Recommendation for the transfer of Herbert Quick, now employed at Sequoia National Park, to the position of general foreman in Hawaii, was forwarded through the superintendent of Sequoia, for approval.

220 - New Construction

The concrete foundation and cellar for the ranger cottage at Haleakalana, being constructed by the CCC, were poured, and construction of floors and framework started. At Kililua cottage No. 4, under construction by the CCC, was completed during the month and the foundation of the 5th poured and construction started on the frame.

230 - Special Improvement Activities

CCC - In celebration of the 6th anniversary of the CCC in the islands and also as a farewell for departing enrollees, an open house and luau was given by the boys at the CCC camp on March 25. Some 200 yrs and about 250 of their guests were in attendance at this party, which included a dance after the luau (Hawaiian dinner).

The project superintendent's report shows a daily average of 170 enrollees released to him during the month of 23 working days; making a total of 3968 man days on the projects. There was a loss of 326 man days due to bad weather and 790 due to conditioning of new enrollees. At Haleakalana the foreman in charge reports 472 man days at this stub camp of 26 enrollees. Screens were installed in the messhall and kitchen; an extension was constructed on the kitchen for the refrigerator and stone walls constructed around the outside of the barracks and kitchen below the floor line to prevent wind from blowing the buildings. These last named jobs were done by the enrollees at the Haleakalana camp.
400 - Interpretation

410 - Lecture and Guide Service

Ranger Schulz continued in the capacity of acting park naturalist and was assisted in lectures by Assistant Geologist Waesche.

430 - Research and Observation

434 - Archeology: Dr. H.A. Powers, who is acting ranger in charge of the Haleakala section, is continuing his research on Hawaiian artifacts in the crater region.

500 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

Travel to the Kilauea section totaled 11,977, as compared with 13,314 for March 1939; and at Haleakala it was reported there were 1,635 visitors as compared with 1,600 for last year.

520 - Visitors

Mr. and Mrs. Albert Judd of Honolulu spent the better part of March at the Volcano House and plan to stay on until the middle of April. Mr. Judd is manager of the Bishop Estate, and authority on things Hawaiian.

March 27 - Mr. Vincent Astor, accompanied by the Duke and Duchess of Sutherland, and Mr. Walter Dillingham, Honolulu capitalist; for lunch. They arrived at Hilo on Mr. Astor's yacht, Kourmah. Dr. Jaggar joined the party in Kona and accompanied them to the park.

March 31 - Mr. and Mrs. James McCulloch visited the Volcano Observatory. Mr. McCulloch is connected with the American Telephone & Telegraph Company.

600 - Protection

610 - Ranger Service

Recommendations were submitted for the appointments of Antone H. Medrano and Robert Plunkett, chosen from Civil Service registers, for the positions of junior park wardens at Kilauea and Haleakala respectively.

630 - Wildlife Protection

Following a verbal complaint by the ranger in charge of the Haleakala section, concerning release of pheasants within the park boundary by an employee of the Board of Agriculture and Forestry, Territory of Hawaii
A letter was written to the President of the Board, calling attention to the fact that this was contrary to park regulations, etc.

A bill was introduced in the territorial senate to protect the native and migratory birds in the islands. This bill has been agitated for by local conservationists of birdlife for several years and it is hoped that favorable action will be taken.

650 - Building Fire Protection

A fire drill at the Volcano House was conducted by the ranger staff and the personnel and equipment there found to be efficient.

680 - Accidents

On March 8, government-owned Chevrolet, No. 194, was damaged slightly and the driver suffered a severely bruised hip, when it turned over on a curve between the park and Hilo. This has been made the subject of a separate report to your office.

900 - Miscellaneouss

Chief Clerk James K. Higashida returned from the chief clerk's conference held in Washington, on the 25th. Mr. Higashida took annual leave after the conference and visited several of the parks and monuments before coming back to Hawaii.

Calvin Christ, eldest son of our chief ranger, took first place in the quarterly contest for individuals at the Dewar Course matches sponsored by the Oahu Rifle and Pistol Club, his score was 379.

There was introduced in the territorial house of representatives a bill requiring that all territorial employees take an oath of allegiance to the United States before entering on duty. While this is a controversial measure it is of interest to note that the vote was taken, among 11 who opposed the bill were three representatives of Japanese racial extraction. None of this group voted in favor of the bill.

Edward G. Wingate
Superintendent
Edward G. Wingate, Superintendent  
Hawaii National Park


Dear Mr. Wingate:

The routine of the Observatory has proceeded as usual, the most extreme natural happening was heavy rain followed by tilt and crack openings about March 2, and Assistant Geologist Wasche has assisted with naturalist lectures in the absence of any regular appointee.

Volcanic Activity of the month

Nothing of volcanic activity has occurred, study of the fault movements near Devils Throat March 26 revealed some increase of cracks and bumps but not of ground temperature, and the felt earthquakes were a slight shock March 14, 9:54 a.m. felt in national park, and a feeble one March 22, 10:57 p.m. felt in Hilo.

Rainfall over 19 inches in one day in Hilo March 2, registered 11.02 inches at National Park March 2-3, and 17.54 inches for the week ending March 5. The flood was damaging in Hilo, and the Olaa mill well rose 3 feet above the flood level of 1938 so as to require removal of all machinery.

The following are the local data for the month:

<table>
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<tr>
<th>Week Ending</th>
<th>Seismicity</th>
<th>Slides</th>
<th>Crack Openings</th>
<th>Local tremors and quakes</th>
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<td>2</td>
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<tr>
<td>12</td>
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<td>26</td>
<td>3.50</td>
<td>0</td>
<td>10.0</td>
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</table>

Work of the Volcanologist

Dr. T.A. Jaggar has continued work on his monograph on "Craters", the tests of model seismoscope with shaking table were continued to March 20, and a trip to Hilo for lectures at the University of Hawaii was made March 5-18.
In Honolulu gas tubes from Sulphur Bank were taken to Dr. Ballard for analysis, a conference was held with President Crawford on cooperation with the University, problems of the Hawaiian Volcano Research Association were discussed with President Atherton, and a course of three public lectures on modern volcanology was given in Farrington Hall to audiences of 300-400 persons, with illustrations.

On returning to National Park some work was done in requisition of materials for 1941, on letters, on conference with Superintendent, and a conference March 29 with Major Zerbel and Mr. Helcher, US Engineers, on the survey in progress for Hilo lava barriers. The new spectrograph for work at the craters arrived. A medical examination, requested by the Washington office was obtained March 31.

An important paper has been published in the American Journal of Science on "Volcanic Gases" by Dr. E.S. Shepherd, including Kilauea gas and rock analyses. There was received from Dr. J.H. Payne an analysis of warm water from Pohokū March 24.

Work of the Assistant Geologist

Mr. Hugh H. Waache reports he has been at work converting seismogram earthquake amplitudes into actual ground movement at Kilauea, expressed in microns, for the years 1936-1937 and 1938. This is entered in the record books. About 50 visitors have come to the Observatory.

Special activities were assisting Ranger Minter in figuring out the gear combinations of the Seneca Falls Lathe, March 6. Assisting Ranger Jess with automobile road counter work March 8. Shipping US Coast and Geodetic Survey level and rod March 10. Giving lectures at Uwekahuna museum March 11 and 16 to audiences of 150 and of 15 persons respectively and on last date doing office work at headquarters. Measuring levels and angles with Wong, office calculations, etc., March 11 and 13. Collecting gases at Sulphur Bank March 14. Inspecting and measuring temperature with Ranger Jess along Chain of Craters area March 21, and continuing regular work throughout the month with angles, tilt, seismograms, etc.

Work of the Assistants

S. Sato in addition to library and clerical work has assisted with running levels at Halemaumau.

H. Yasumaka has continued janitor and garage service, shop work, crater and seismograph routine, meteorologic routine and all outdoor work.

A. Okada has tested instruments in addition to mechanical and carpenter work. The seismoscopes of some outlying stations have been called in for revision.
Lectures, Publications and Visitors

Lectures in Farrington Hall, Honolulu, University of Hawaii, to public audiences by Dr. T.A. Jaggar under the Adult Education Division, were given as follows with lantern slide and motion picture illustrations: March 7, Volcanoes and Volcanic Earthquakes; March 13, Predicting coming Eruptions; March 15, The Earth as a Living Organism.

The "Volcano Letter" for August-December 1938, No. 462, inaugurating what will hereafter be a quarterly form of this publication printed by the University of Hawaii, was issued the first week in March.

The following were published:


Chester K. Wentworth and Austin E. Jones. Intrusive Rocks of the leeward slope, Koolau Range, Oahu; same, p. 9.


The following were visitors to the Observatory:

March 27. Mr. Vincent Astor and the Duke of Sutherland, Yacht Nourmahal.

March 31. Mr. and Mrs. James McCulloch, American Telephone & Telegraph Company.

Very respectfully

T.A. Jaggar
Volcanologist
### STATISTICAL REPORT NO. 8
#### FINANCE AND ACCOUNTS
##### MARCH, 1939

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Appropriations</th>
<th>Allotted</th>
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UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

(Kiliman Section)
Hawaii
National Park for the month of March, 1933

<table>
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<tr>
<th>This Month</th>
<th>This Travel Month To Date</th>
<th>This Travel Last Year To Date</th>
<th>Last Travel Year To Date</th>
<th>Increase for Travel Year</th>
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<th>Percent</th>
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PRIVATE TRANSPORTATION:

Cars first entry, ............
Cars reentry, ............
Motorcycles, ............
Total motor vehicles, ............
Persons entering via motor vehicles, ............
Persons entering via other private transportation, ............
Total persons entering via private transportation, ............

OTHER TRANSPORTATION:

Persons entering via trains, ............
Persons entering otherwise, ............
Total other transportation, ............
GRAND TOTAL ALL VISITORS, ............

Automobiles in public camps during month, ............
Campers in public camps during month, ............
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

Hololmula Section, Hawaii National Park for the month of March, 1933

<table>
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<th>Last Year</th>
<th>Increase for Travel Year</th>
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<td>To Date</td>
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<td>OTHER TRANSPORTATION:</td>
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<td>GRAND TOTAL ALL VISITORS,</td>
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<th></th>
<th>This Year</th>
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<tr>
<td>Automobiles in public camps during month,</td>
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<tr>
<td>Campers in public camps during month,</td>
<td></td>
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Silverword plant, found in Haleakula crater. Photo by James Cunningham.
One of 2 public shelters at Paliku, Haleakala crater, Maui; constructed by the CCC. Photo by James B. Cunningham.

Looking west through Haleakala crater, from Paliku, photo by James B. Cunningham.
Looking across Haleakala crater toward island of Hawaii, showing Mauna Loa and Mauna Kea in distance. Photo by James Cunningham.

Steam emerging from Halemaumau, Kilauea crater, after heavy rain. Photo taken March 6, 1939.
Sliding Sands at west end H-lera la crater. Photo by James Cunningham.

Cliffs at calico, west wall E lastla la crater. Photo by James Cunningham.
SERIES OF FOUR PICTURES OF MOUNTED SPECIMENS OF NATIVE HAWAIIAN BIRDS TAKEN BY BARTER GENDER E. OLSON AT THE BISHOP MUSEUM, HONOLULU.
Two of the Hawaiian nectar-eating birds which are believed to be increasing in numbers in Hawaii National Park. The apapane is quite common while the iiwi is still comparatively scarce.
Akiala Hemignathus obscurus (Osgg.). Showing pecu-
lar curved bill common among native birds which feed
on nectar. This is one of the rare nectar-eaters
found in the forests of Hawaii National Park.
Oo Moho nobilia (Warren.), now considered extinct. The yellow feathers of this bird were used by the Hawaiians in their feather work, particularly for feather caps. This shiny black bird subsisted entirely on the honey from lobelia flowers and when grazing and cultivation exterminated that plant, the oo was not able to survive.
Three shore birds; golden plover (*Charadrius dominicus sultus* (Gmel.) (koles)); wandering tattler (*Heteractitis incanus* (Gmel.) (alili)); bristle-thighed curlew (*Numenius tahitiensis* (Gmel.) (kioea)).
Frond development on hepia fern (Cibotium chordiscol), in wet forest near Lava Tube, photo taken March 6, 1939
Lake formed in Kilauea crater after heavy rain, photo taken March 6, 1939
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAI'I

April 9, 1939


During the month we enrolled 54 boys and discharged 80. 2 dishonorable, 1 medical, and 77 expiration term of service. This heavy loss was due to the limit of 2 years service.

There was a total of 277 man days lost due to sickness, 24 man days lost from operations, 55 man days due to minor accidents, 73 man days lost due to inoculation of new enrollees. The rest due to colds, etc.

Two safety meetings were held during the month, attended by all the camp and many useful points were brought out. The safety assistant reports all safety regulations are being carried out by this camp.

The Project Superintendent report shows a daily average of 170 enrollees released to him during the month of 23 working days making a total of 3908 man days on the projects. There was a loss of 322 man days due to bad weather and 690 man days loss due to conditioning of new enrollees.

235P Private Garages:
69 man days were used on this project.

250P Removal of Exotics:
466 man days in the Giant Kea area.

305 Prep. & Traps. of Materials:
237 man days used on this project.

306 Camp Construction and Personal Cottages:
698 man days used on this project. Cottage No. 5 100% completed. The foundation for cottage No. 1 has been poured and construction of the frame started.

E-3 Boundary Trail:
536 man days used on this project.
Work continued on some 9 other projects in the Park.

The recreational activities continued during the month with two meetings of the entire camp.

On Saturday, March 25th, this camp gave a lam for the boys who were leaving us not to return. Some 450 enrollees, their families, friends, Camp and Park Personnel attended. Superintendent Edward G. Wingate gave a short talk. Music and dancing were enjoyed after the lam.

Haleakala Section, Hawaii National Park, Mani, CCC Stub Camp:

The foreman reports 472 man days worked at this camp. Screens were installed in the mess hall and kitchen. An extension was constructed on the kitchen for the refrigerator. Stone walls constructed around the outside of the barracks and kitchen below the floor line to prevent the wind from blowing the buildings.

The concrete foundation and cellar on the ranger cottage were poured and the construction of floors and sides started.

Both Dr. Phillips of this camp and Dr. Jones of Mani report the health of the camps very good.

Frank C. Huston
Camp Director
CCC HNP
Memorandum for the Superintendent:

Subject: Chief Rangers Narrative report for March 1939.

The foregoing report covers the activities of the Ranger division for the month of March, 1939. The Rangers individual reports are attached.

General Weather Conditions in the Park.

Heavy rains were experienced in this section of the park during March and extensive damage was done to roads and trails. Run off water from Kau Desert was noted to have reached a height of 18 feet in some of the dry gulches near Pepeiao Kipuka resulting in much erosion of soil in some places and sedimentary deposits in others. Rain fell heavily throughout the month and several large temporary ponds were formed on the floor of Kilauea at the further end.

Status of work.

All work of this division is current. The small tool and equipment inventory is about 95% complete.

Park Inspections.

The Chief Ranger covered practically the whole park on patrol of the new boundary trail.

Maintenance.

The patching with bituminous and gravel of the Kilauea Rim Road was begun by park laborers and is about 40% complete.

Quarters were repainted, and occupied by clerk-accountant Choffe.

It is recommended that the roof of the "Trailside Museum" at altitude 6600 on Mauna Loa be waterproofed. Continued leaking as at present will result in the rotting of the roof frame.

Minor but unsatisfactory repairs were made to Hilina Pali Road by CCC. This should be put into passable state so that patrols can be made without danger to cars.
Improvements.

The tank at Fire Cache #2 was installed March 23rd, by Park Labor.

A meeting of the committee on roads was held and it is recommended that 2200 feet of ditch alongside or the road shoulders below Waikamalu Museum be stone lined and the shoulders and road-edges repaired. This can wait until the new appropriation is received. The two park traffic countiers were repaired and will be installed early in April.

It is also recommended that boxes be placed around all turn-off valves on the residence water systems wherever these valves are in danger of becoming covered or overgrown with vegetation.

One 5 bar telephone generator was installed at Kilauea Military Camp for the convenience of park employees in receiving incoming calls after hours. This phone is plainly marked "H.P.S." and replaces a RMC, 6 volt box.

It is recommended that a connecting trail be built from Kipuka Nene shelter to the boundary trail near the Shipman goat corral.

A connecting trail is also needed from the northeast corner of Aahou Ranch, up Kalaau Valley Falls to Hilina Pali Road.

A small overnight shelter is badly needed at Aua Point to facilitate ranger patrols of that area. No new materials would be needed for this.

The CCC are almost ready to begin planting trees at Kanoa and will start as soon as a site camp is established in that locality.

314 Complaints: Reports have already been submitted on a complaint by Mrs. O’Keefe.

Ranger, Naturalist & Guide Service: The ranger division continued to conduct all regular and special tours and other naturalist activities. It is estimated that 2400 visitors were contacted by rangers during the month.

Birds: Six rolls of color film and 72 black and white photographs were taken of mounted museum specimens of Hawaiian birds at Bishop Museum, Honolulu. Material was also prepared to continue the bird talk previously given with the park lantern slides of Hawaiian birds, this work being done by the wildlife ranger.

Natural Phenomena: What first appeared to be a new rumorle in Alaeue crater was investigated and found to be old, heavy rains having increased the volume of steam issuing.

Visitors: Mr. Albert Judd, Trustee of Bishop Museum and authority on Hawaiian forests is convalescing at the Volcano House. He has accompanied the Chief Ranger and Rangers into several areas in the park and given many valuable suggestions and advice. He has suggested that manane seeds be planted in the extensive pig-rootings found in some localities.

Police Protection: Regular patrols were made of all roads and into all districts of the park. Several motorists were warned for minor infractions and
Several motor assists were made.

620 Fire Protection: A new hydrant was discovered between quarters #2 and #3. This will improve the protection of these two houses. Our fire map will have to be revised to include this plug. A fire drill was held at the Volcano House and personnel and equipment were found to function efficiently. The hydrant and hose house at the headquarters building were changed and are now located in a more handy location and position for use. It is suggested that cooking over an open fire be discontinued at the park warehouse. This condition presents a definite fire hazard and as the storekeeper is furnished quarters in the park, it is recommended that his cooking be done there.

630 Accidents: Two accidents, one to a private car and one to a park car have been elsewhere reported in detail. A minor accident to a visitor has also been submitted separately.

640 Destruction of Predatory Animals: Eleven pigs and nine goats were destroyed in the Kilauea-Mauna Loa section and 15 goats in the Haleakula section.

650 Signs: It is recommended that the Kilauea Military Camp be memorialized to use the standard park colors for their signs, especially those seen by and guiding park visitors.

It is also recommended that an acting chairman be appointed to serve in Mr. McCormick's absence on the committee of roads and trails for the purpose of improving the present sign situation before the summer season arrives. It is understood that a CCC project is set up to furnish labor for this work, the rangers at present being busy with other duties.

660 Sanitation: All latrines or pit toilets were limed during the month. It is suggested that steps be made to make use of the CCC incinerator as soon as possible. It is apparently not being used at present due to lack or scarcity of wood. Improvement of this wood situation is not eminent so the installation of oil-burning equipment seems practical.

700 Miscellaneous: Twenty-four (24) cords of wood were obtained through various sources by the park and 10 cords were distributed to residences of the staff.

It is suggested that the driftwood washed together at Kipuka Hene be hauled to headquarters for firewood. This, at present presents a fire hazard.

Respectfully submitted:

Joseph N. Christ, Chief Ranger.
Memorandum to Superintendent E. G. Wingate
through Office of Chief Ranger:

Enclosed are the Ranger report, weather report, narrative report, half-month and month travel report for the month of March, 1939.

Received the copy of Underwriter’s Code, and will make the fire report within the next few days.

H. A. Powers
Acting District Ranger.
Memorandum to Superintendent E. G. Wingate through office of the Chief Ranger:

Wailuku, Maui
March 31, 1939

The following narrative report of the Haleakala Section for the month of March is respectfully submitted:

000 General

010 Introduction. Two thunder storms, one on the 4th and one on the 17th, brought flurries of hail sufficient to make the ground white for short periods. Moderate Kona weather has prevailed for most of the month.

020 General Weather Conditions. Two good Kona rains were recorded during the month, with moderate Kona conditions prevailing except for seven days of trades from Nov. 6 to 12 and four days of trades from Nov. 16 to 23. Frost has been noticed as low as 6000 feet along the road on several mornings. There have been only 5 cloudy days in the crater, and 6 cloudy days at the Ranger Station, with 13 clear days in the crater and 8 clear days at the Ranger Station. A total of 10.26 inches of rain fell at Pakamoa Observatory, of which 8.06 fell during the Kona of the first five days of the month. This same storm brought 5 inches at the Ranger Station, and 6 inches at the proposed intake. Total rainfall for the month was 6.46 inches at the Ranger Station, and 5.95 at the proposed intake. During the one week of trade wind weather, 0.13 inches fell at the Ranger Station, and 0.30 inches at the intake.

100 Administrative

150 Equipment and Supplies.

Received March 10, the Servel refrigerator for the CCC Kitchen.

Received March 17, a gasoline pump for the CCC from Kahului Store. Pump is of the continuous flow type with no device for measuring the flow that we can discover.

Received March 20, 6 each—headlight, tail light, and stop light bulbs.

Received March 24, 6 fire extinguishers, 5½ gal. "Foamite" type with 10 packages of chemical for filler. These were immediately charged and installed in the CCC camp buildings.

Received March 27, 100 foot surveyors chain from Headquarters.

Received March 30, the Servel refrigerator for the new Ranger Station. This has been stored in the garage.

March 31, disposed of the Graham-Paige sedan, No. 181, to Tom R. Zigget, as per letter from the Superintendent of Mch. 30.

Plans, Maps, and Surveys. Survey of the Ranger Station area and the proposed water system has been started.
200 Maintenance, Improvements, and New Construction.

220. An addition has been built on the CCC messhall next to the kitchen to house the refrigerator, and the windows of the messhall have been screened. The stonewalls around the CCC buildings to keep the wind out from under the floors have been completed. There effect has been noticeable during the week of trade wind weather. Lockers for all barracks were completed and installed the first of this month.

230 New Construction. Work on the Ranger's Quarters is progressing slowly but carefully. The foundation walls are completed; plate, girders, floor joists and rough floor is installed; concrete floor of both front and back porch is finished; and all floor plate of exterior and interior walls is completed. Forms are completed for the foundation of the fireplace. About three days work has been done on the new trail leading from the park entrance to the Halema'uma'u Trail.

400 Flora, fauna, and natural phenomena.

480 Natural phenomena. The mamani trees are now in full bloom.

500 Use of Park Facilities by the Public.

510 Increase or decrease of travel. The traffic counter recorded visits of 327 cars this month compared with 364 last month and with 320 during March of last year.

540 There has been no use of crater cabins during this month.

600 Protection.

640 Twenty-five goats, including 6 females and 19 males, were killed in the crater during March.

H. A. Powers
Acting District Ranger
MEMORANDUM FOR THE SUPERINTENDENT
THROUGH THE CHIEF RANGER.

There follows my narrative report of activities for the month of March, 1939:

Annual leave was taken the early part of the month and while in Honolulu a good deal of this time was spent at the Bishop Museum on bird research and photographing mounted museum specimens and habitat settings. Since returning to the park considerable time has been spent in the darkroom developing and printing these pictures. Quite a lot of this work has been done at night due to other duties during the day, as was the work of compiling the notes taken at the museum. Excellent cooperation and assistance was given me by Mr. Edwin H. Bryan Jr., curator of Collections at the museum. All available specimens were turned over to me for study and photographing, most of this work being done in the museum photographic studio.

Conducted hikes were made to Napeau Crater with (2 cars) 11 students of Hilo High School under the charge of Miss Wetmore on Mar. 26. Also on Mar. 26 with a group of 31 from the same school, Mr. Robt. Baldwin in charge. Total cars for the latter group was 6.

Only one general park tour was made, that on Mar. 17, when a party of 24 persons (2 cars) were taken over at the Lava Tube.

Two Mauna Loa Truck Trail tours were made with a total of 2 cars and 6 persons.

A total of 78, 4X5 films were developed in the darkroom and 300 prints were made.

A patrol hike was made by Ranger Jess & myself on Mar. 29 along Hilina Pali to Kipuka Pepeiao and back to Hilina Pali shelter via the trail. Only about 40 goats were seen and only one killed. The trail was found to be very badly damaged by recent storms. It is in such condition that it would be impossible to follow in places, even the shr markers being washed away. It was noted that water had reached a depth of 10 feet in some gulches. A large cave on Hilina Pali near Pepeiao was partially explored but a thorough examination could not be made due to lack of proper equipment.

An exploration trip was made into Alaeua Crater on Mar. 30 with Ranger Jess. Easy entry was made at the west end and a complete circle of the crater was made along the top of the talus slope. The 3 goats
which inhabit this crater were encountered. It was found that due to
a scarcity of grass, they subsist largely on the young leaves of namake,
Pipturus albidus, which is kept well cropped. Oi, Verbena bonariensis,
was also noted to be on their menu.

Considerable panakai, Eupatorium riparium, was found growing on
the talus slope of the west wall. All that we found was pulled out but
quite a lot remains, being out of reach.

A fumarole area of about 500 sq. ft., was found on the talus of the
east wall of this crater. The appearance of this steam vent would indi­
cate that it is not new but due to its distance from the lookout on the
Chain of Craters Road, it is not visible from there at all times. The
fumarole is located in a dense patch of okupukupu fern, Nephrolepis
exaltata. About two dozen small lizards varying in size from two to
five inches long were found in the near vicinity of the vent. As several
were seen along the north and west walls of the crater, it is presumed
that their presence around the steam vent in such numbers was to take
advantage of the heat. One specimen of this lizard was taken and has
been tentatively identified as Azure-Tailed Skink, Emoia cyanura.
Tinker in his book, "Animals of Hawaii," states that the upper range limit
of this species is 3,000 feet. The specimen has been preserved in alcohol.

Research on birds has been continued during the month in spare time,
in preparation for a bird talk to accompany the park lantern slides of
Hawaiian birds. This is now practically complete and can be put to use.

The Mapau Trail was found to be in need of trimming-out and the grass
is becoming long on the trail-bed.

The second cattle guard on Mauna Loa Truck Trail is again in bad
condition, probably having been broken by CCC trucks.

Respectfully submitted,

Gunder M. Olson
Ranger.

CC-Chief Ranger.
MEMORANDUM TO THE SUPERINTENDENT THRU THE CHIEF RANGER:

SUBJECT: Narrative report for March.

On March 1 Ranger Hinter and I returned from Puu Ulaula where we had policed up the resthouse and placed caned on the South wall and end of the building.

The recording units of the traffic counters were taken apart and cleaned, and new batteries installed. The plates were removed from the defective contact unit, scraped, shellaced, and copper contact points installed. It was then taken to Hilo to be vulcanized and is now in good condition. Shelters have been constructed to house the recording units and these will be installed just as soon as time is available.

On Sunday, March 12, I investigated a wreck on the Malaekahoa Highway near the old Kau Entrance. No one was injured and a detailed report has been submitted.

On Tuesday, March 14, I accompanied Chief Ranger Christ and CCC Project Supt. Rennie on a trail construction and fence line inspection from Ahahou Ranch via Puu Kaone to Hilina Pali.

On Thursday, March 16, I installed a new 5 bar generator in the switchboard at K. M. C. This should enable them to ring out at any time, especially at night when our system is connected together. Subsequent checks have shown that this new installation has eliminated their trouble.

On Saturday, March 18, considerable comment was made by an Inter-Island driver regarding the conduct of our Park tour and lecture. This has been covered by a detailed memo.
On Friday, March 24 I installed a new 5 bar generator and 2500 ohm ringer coils in one of our old telephone instruments and replaced the defective telephone at Haleakamau with this rebuilt instrument. It is working in a satisfactory manner.

On Monday March 27, I assisted Chief Ranger Christ in the conduct of a fire drill at the Volcano House.

On Tuesday March 28, I accompanied Ranger Olson on a patrol and goat hunt in the Hilina Pali-Pepian area. An old lava tube at the Southwestern corner of Kipuka Abi was partially explored.

On Thursday March 30, I accompanied Ranger Olson in an exploration of the walls and floor of Alealea Crater. An active steam vent was discovered in the talus slope on the Southeast wall of the crater. Three goats were observed on the lower floor, and a number of specimens of the azure tailed skink were observed on the talus slopes near the steam vent. A number of birds were observed, but all were members of the more common species regularly seen about the Park.

Some time was spent in the dark room during the month and satisfactory development of roll film, both verichrome and SS panchromatic, was obtained. A little difficulty was experienced in turning out satisfactory prints, but it is believed that with a little more instruction and practice, good work can be turned out.

Signed:

Arthur L. Jess,
Park Ranger.
MEMORANDUM TO SUPERINTENDENT WINGATE
THRU CHIEF RANGER CHRIST

SUBJECT: Ranger Report for the Month of March (Schulz)

Assigned duties and work accomplished: 
Notes: THIS ITEM CONTINUED ON PAGE 2

Designated to act as "roust-about" ranger for the month of March.
Flag custodian for one week, March 5 to 11 inclusive.

Museum Lecture every Wednesday and Saturday
Made up Ranger Report and Naturalist Report for the month of March.

Correction and distribution of the new fire manuals
Worked on the "Fane and Wildlife" paper for the Wildlife Division.
Assisted in bringing horses down from the Mauna Loa 6000', 3/5.
Hiked over the Sandalwood, Haleakulea, Soldier, and Puu Hulu trails, and scrubbed the Haleakulea-Sandalwood junction sign which was literally covered with autographs—chiefly those of soldiers.

Assisted in working over the revised trail system designations received from Washington.

Endeavored to catch Interisland steamer on March 8 by 4:00PM with official mail, and met with accident near Olan,
March 9 to 12 inclusive was confined to bed as a result of injuries received in that accident. Geologist Hugh Waesche gave the Wednesday and Saturday lectures during this period.

Completed corrections and touching up of the Haleakulea relief map in Park Headquarters lobby.

Read official bulletins and memos referred to the Ranger and Naturalist Divisions for their information. Familiarized self with Naturalist files and kept same up to date.

Weekly Observatory reports on local seismic activity distributed and filed every Wednesday.

At Uwekahuna Museum the projectors have been moved from the rear of the lecture hall to the projection room and for this reason the fire extinguisher was also removed to the new location (1 qt. C02 type).
The revised telephone directories were placed at museum phones.

Comments:

Would like to take this opportunity to express deep appreciation for most considerate and kind treatment and the thoughtful attentions paid me at the time of my accident near Olan and during my convalescence by the whole Park Staff.

The CCC "white wing patrol" seems to be doing much better than last month, and whenever observed the boys have been working diligently.

The CCC boys at the museum make up for perhaps a slight lack of initiative in continuing to be extremely courteous, conscientious, and very anxious to follow orders and to help when work is carried on by the undersigned at Uwekahuna. The broken panes in the museum display cases have been replaced by Kawasaki.

Partly because of confinement other CCC jobs were not observed sufficiently to justify comment.
The water tank at the #2 fire cache has not yet been set up. This should be done as soon as practicable as the roof surface of the cache is small and it will take some time to fill the tank. With decrease in rains and increase in travel the fire hazard will soon start on the increase.

It would perhaps be prudent to make it a policy to use the short cut between the rear of Headquarters and the Park Naturalist house only in case of emergency as already much walking has packed down the soil around the newly planted ferns, etc. Continuance of the practice will definitely hinder proper growth of the new plants.

Due to circumstances beyond the control of the Park Clerks, the Morge refrigerator at Ranger Schulz's residence has not yet been serviced. The motor has been operating 24 hours a day for the whole past month. This will mean as increased expense to Hawaii National Park in the form of electricity used. Trading for a refrigerator in the warehouse was investigated and found to be impracticable.

Altho the beginning of and the end of the "Soldiers' Trail" between Little Beggar Splatter-cone and Uwekahuna Bluff (Museum) are well marked and in good condition, the major part of the trail is not only poor, but extremely hard to follow. It is suggested that either the trail be put into proper condition or else signs at each end of the trail warn the hiker of its condition. Several instances have come to my attention where hikers were displeased with regard to the "Soldiers' Trail".

Not all of the Rangers are in possession of an official permit to drive Government cars. It is suggested that a check be made on this as it might lead to an embarrassing situation if anyone inside or outside the Park were to challenge the driver.

The lawn in the dumbbell shaped plot in the Uwekahuna parking area is about one foot high. There are practically no weeds present, and if it were regularly mowed by the Park laborers as is the case in the headquarters area, the appearance of the parking area would be materially improved.

Assigned duties and work accomplished (CONTINUED FROM PAGE 1):

Assisted Ranger Olson printing his bird photographs 3/21,24.

Wrote one press release 3/22

On duty 4:30 PM till midnight at the luau, 3/25

Took Mauna Loa tour, changed seismograph and read the rain gauge, 3/26.

Made several general park patrols when other rangers were otherwise occupied.

Acted as Park Service representative at the showing of the Krakatoa film at EMC on 3/27.

Gave two special showings of the 1935 and 1934 eruption film, and was assigned to conduct the Mrs O'Keefe party on a general park tour, and made a report of the unsatisfactory outcome of the same.

Museum flower beds are being weeded, trimmed and partially replanted by the two 8CO attendants.

Museum display cases are being painted white inside. Museum accession cards and catalogue file is being started. The museum material is thus of necessity being numbered; white enamel and black India ink are being used for the purpose.
Time off: Total of four days time off were allowed during the month of March in excess of time lost thru sick leave. These were taken as follows: whole days: March 5, 19, 28, and half days: March 4, 18.

Fauna and Flora:
Four goats (two male and two female) were seen at 10:30 on March 26 at the upper fire cache, #8 on the Mauna Loa Truck Trail.
One ko was seen at 3:30 PM on March 27 at Makaopuhi.

Respectfully submitted,

Paul Ernest Schulz
Park Ranger
Memorandum to the Superintendent:

Thru the Chief Ranger

Subject: Narrative report for March

Returned from Puu Ulaula rest house with Ranger Jess on March 1st, after installing cane in south end of rest house and general policing up.

Rode new boundary trail with Chief Ranger Christ and Ranger Schulz, from end of truck trail along upper end of fenced area on Mauna Loa, down south boundary to cross fence cutting back to Six tanks and in to Bird Park corral. Gate should be installed in the above mentioned cross fence, so that horse patrol can be continued to Prison camp. Hiked over trail from Prison camp to stone fence above corner. Both fence and trail in good condition.

The bridle path on hill below Museum needs erosion control for about 100' above Rim road. Trail on slope below road is badly in need of about 150' of about 8' dry wall to prevent trail tread from being washed away. The two gullies crossing trail in same area should have cemented rock walls on the down stream side to retain the trail tread. Should be about 8' high and about 15' long.

Inspected Bird Park fence and submitted report concerning same. The distance around the fence is approximately 9500' and will require approximately 585 fence posts, 18 corner posts, and 4 gate posts, in the event that steel posts can be purchased to eliminate incessant replacement. Saw three pigs in Kipuka Paulea which were subsequently destroyed.

Conducted one special tour of 19 cars and 96 people, one of 2 cars and 65 people, and one tour and field trip thru Bird park of 8 cars and 42 people. These three trips were shown the Kilauea and Mauna Loa film, and given a short lecture by myself. One trip with 5 cars and 39 Air corps officers was conducted around the park. Also conducted one regular park tour of 4 cars and 48 people, one Interisland tour of 6 cars and 38 people. Report covering accident to Mrs Mabel Eaton of Elbow Lake, Minnesota was submitted.

Took statement from Ranger Schulz and typed same and accident reports for his and the Chief Ranger's signature.

Made one patrol to Hilina Pali and shot 2 goats. Saw about 55 goats in 5 groups.
Represented Park at KMC during one showing of Krakatoa to 165 persons.

Installed Holmes 35mm and the Bell and Howell 16mm projectors in the projection room at Uwekahuna, eliminating projector noise in the lecture room so that the lecturer's voice can be heard at the rear of the room. Have been operating the projector for the lecturers during the past month.

The water tank at the lower tool cache should be set up and the telephone installed before fire season sets in.

Changed the seismograph drum at the Mauna Loa station 6 times during the past month.

Have seen the Io above Bird park, several time, always on the wing.

Suggested to Chief Ranger that 5 bar generator be installed at KMC so they could call Park in case of emergency. This has been installed by Ranger Jesse.

The trail signs in the Mauna Loa and Kau areas are sadly in need of replacement.

John E. Minter
Park Ranger.

Warned 5 speeders and assisted one motorist.
**MONTHLY SUMMARY.**

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<tr>
<td>Heavy</td>
<td></td>
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<tr>
<td>Fair</td>
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**REMARKS:**

Very poor fall flowers
Low and variable winds
End of month: Both

Flowers still some available.
UNITED STATES
DEPARTMENT OF THE INTERIOR
"NATIONAL PARK SERVICE"
Hawaiian National Park

FILE NO.

Monthly Report February 1939

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.

ARNO B. CAMMERER,
Director.
MEMORANDUM FOR THE DIRECTOR:

Following is the report of activities for Hawaii National Park during February.

000 - General

020 - General Weather Conditions

During the very early part of the month rainy weather was general in both sections of the park, resulting in some damage to roads and trails. From the 15th on exceptionally clear weather prevailed with one grand day following another. Total precipitation at Kilauea was 14.29 inches and at Haleakula 3.14 inches. Maximum and minimum temperatures at Kilauea were 70 and 47 degrees, and maximum wind velocity at Kilauea was 16 mph on the 16th and 25th. Mauna Loa was snow-capped throughout the month. A rain gauge was received from the Weather Bureau and installed at the Haleakula ranger station.

100 - Administration

110 - Status of Work

All work was current throughout the month. Assistant to the Superintendent Moosman left on the 28th for the mainland where he will be on leave until the first part of June. Clerk-stenographer Whitney was on leave in Honolulu between the 5th and 14th.

120 - Inspections by:

121 - Superintendent: The superintendent returned from the Washington conference on the 15th; and on the 22nd departed for Maui to inspect the Haleakula section, returning to headquarters on the 25th. Routine inspections were made throughout the Kilauea headquarters area. He interviewed Mr. William G. McAdoo, Chairman of the Board of the American President Lines, in Honolulu on the 10th, regarding the request of Hilo citizens that the port of Hilo be made a regular port of call by the line.

124 - Other Interior Department Officers: Mrs. Ruth Hampton of the office of the Division of Territories and Insular Possessions, returned to the park on the 2nd for an overnight visit. She also visited the Haleakula section on the 8th.
David M.L. Forbes, CCC Educational Advisor for the Territory, visited the Kilauea CCC Camp between the 9th and 10th, and the Haleakala camp on the 17th.

130 - Finance and Accounts
A detailed report is attached.

150 - Equipment and Supplies
Fourteen one-quart fire extinguishers and one electric refrigerator were received in February. On the 17th invitations for bids for one pick-up truck for use at Kilauea were circulated among the local dealers.

200 - Maintenance, Improvements and New Construction

220 - Improvements
Repairs were made to the resthouse at Pau Ulaula (10,000' elevation, Mauna Loa). Cases was used on the south inside wall, making the shelter much warmer, and one four-burner kerosene stove was installed to replace the worn out one. Approval was requested and received to charge $0.60 per person per night for the use of this resthouse, no charge to be made for those 16 years of age or younger when accompanied by an adult.

230 - New Construction
The third set of quarters under construction by the CCC was 96% complete at the end of the month. Forms were constructed and concrete will be poured for the foundation of the ranger's house at Haleakala early in March.

300 - Activities of Other Agencies in the Park

310 - Public Service Contractors

Nineteen thirty nine rates for the Volcano House and Photo Studio were forwarded for approval on the 4th and those for E.J. Walsh, operator at Haleakala on the 26th. Mr. Walsh's annual report was mailed at the same time.

320 - Cooperating Governmental Agencies

Excellent cooperation was furnished the Service by L.W. Bryan, Territorial Forester for this island, by allowing our force to cut the dead trees on the territorial forest reserve along the Mamalahoa Highway (main road on the island road) for fire wood.
J.A. Peck, ranger in charge of the Haleakala section, and his family left on the 23rd for the mainland, on an extended leave of absence, and with the hope of obtaining a transfer to a mainland park, because of sinus trouble with which he suffered intensely while in the Islands. Howard A. Powers has been designated acting ranger in charge for that section.

Recommendation was submitted for the transfer of Gunnar O. Fagerlund, now serving at Colonial, to Hawaii as assistant park naturalist. With the departure of Mr. Hoosaw, who had been taking charge of naturalist activities, for the mainland, Ranger Schulz has taken over the naturalist duties until Mr. Fagerlund reports.

Approval was received from the Director's office for the establishment of two junior park warden positions, one at Haleakala and one at Kilauea, and registers have been requested from the local Civil Service office.

Recommendations for the appointments of Ralph K. Shaver, Dr. Fred Ballard and Paul Baldwin as seasonal rangers were submitted for approval.

Paul Baldwin, who served as CCC technical foreman last season, returned again during the mid-term vacation of the University, to conduct further studies in connection with birds of the vicinity. This extra work was done at his own expense.

A number of pheasants were released at Haleakala by the territorial game wardens, on the 24th, without reference to park authorities. This unauthorized release of exotic birds in the park will be taken up with the Territorial Game Farm officials.

A report of the activities of the Volcano Observatory staff is attached.
530 - Visitors
February 9 - Mr. Hugh Lytle, Associated Press representative for
the territory.
  # 11 - Professor Blumer visiting lecturer on sociology from
    the University of Chicago, at the University of Hawaii.
  # 12 - Professor Porteus and Dr. Herrick of the Department
    of Psychology at the University of Hawaii
  # 22 - Deputy Regional Boy Scout Executive Oscar A. Kirkham,
    and Mrs. Kirkham of Salt Lake City, on the 22nd.
  # 21 - Mr. James Cromwell, economist and capitalist of New
    Jersey and Honolulu

600 - Protection

620 - Fire Protection
Quarterly fire hazard inspection was conducted in February; the
fire atlas completed and mailed; also the revised fire suppression man­
ual completed and distributed to the staff.

640 - Destruction of Predatory Animals
Eleven goats were destroyed at Kilauea and fire at Haleakala.

900 - Miscellaneous

CCC - Report of the camp director is attached.

    The advanced Red Cross first aid course, conducted by Capt. R.C.
    Johnson, medical officer at Kilauea Military Camp, was completed by 14
    members of the park and CCC personnel.

    While in Honolulu the superintendent addressed the Visitors' Club at
    the invitation of the Hawaii Tourist Bureau, on February 9th. Some 200
    persons attended the luncheon. He was also the principal guest speaker
    at the annual Washington's Birthday celebration of the Society of American

    A meeting of the park and CCC staffs was held at the park office on
    the 21st.

Edward G. Wingate
Superintendent
Portion of Kilauea Crater with Mauna Loa in background.
(Aproximately 30 mile of Mauna Loa's profile
is shown here)

Incinerator (CCC Job.)
Feb. 24, 1939
Placing forms for CCC cottage #4
Feb. 24, 1939

General View showing progress on Ranger Cottage at Haleakala
Feb. 18, 1939
March 10, 1939


During the month we enrolled 6 new boys and discharged 5, 3 dishonorable discharges for refusal to work and 2 for desertion.

There was a total of 285 mandays lost from sickness, 127 mandays from operations, of this 75 mandays due to three operations for hernia, 11 days due to accidents and the rest to colds, inoculations, etc.

One safety meeting was held during the month, and a practical demonstration was given of first aid to the injured. The Safety Assistant reports that all Safety Regulations are adhered to by the camp.

The Project Superintendent report shows a daily average of 167 enrollee released to him during the month of these an average of 14 were not used due to rain.

There 249 mandays lost due to conditioning of new enrollee and light duty. 158 mandays were used on Job 227 RF on the Mauna Loa Truck Trail. 549 mandays were used on Job 307 completing the landscaping of the school grounds. 650 mandays were used on Job 308 Camp Construction and Construction of Personnel Cottages. Cottage No. 5 is 90% completed. Forms for the foundations of Cottage No. 1 is 85% complete and concrete will be poured as soon as the weather permits. 252 mandays were used on Job 311, Landscaping COO Camp Grounds. 467 mandays were used on Job B-3 Boundary Trail and a stub Camp was established in the Kau section for two weeks.

Work continued on two other regular jobs in the park.

The recreational activities continued during the month with basketball leading the lists.

Mr. Forbes recreational adviser visited this camp on February 6th for two days and left some questionnaires to be filled out by the enrollee.
Hawaii National Park, GC0 Stub Camp Haleskala Section, Maui, T. H.

364 man-days were used on projects in this section of the park.

The Park Superintendent Edward G. Wingate inspected camp on the 23rd and 24th of this month. Dr. Jones inspected camp and gave it a clean bill of health. Your Camp Director made one trip to this camp during the month.

Ace Peck who has been district ranger for this section of the park received a transfer to Sequoia National Park, California and left on the 23rd of the month we will miss him here very much it has been a pleasure to work with him.

Mr. H. A. Powers has taken Mr. Peck place as district ranger.

Respectfully submitted,

Frank G. Huston,
Camp Director,
GC0 HNP
March 3, 1939

Edward G. Wingate, Superintendent
Hawaii National Park

Subject: Report of the Hawaiian Volcano Observatory, February 1939

Dear Mr. Wingate:

The month of February has produced the usual routine and no important changes in Hawaiian craters.

Volcanic Activity of the Month

The following are the local data for the month:

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</tbody>
</table>

The general situation in Halemaumau pit as observed February 22 showed the hole on pit floor southeast was steaming near a long white stained crack. Fume above this eastern wall crack has lately been conspicuous Steam was evident on 1932 cone and along the cove ledge at the base of northeast Halemaumau wall. Margin of floor was sulphurous in several places. Slides made a new scar on the south wall February 5 and February 16, which kept that wall scaling off during the last half of the month. The break makes a wide white scrape up the entire height of the wall on the east side of the southwest rift cavern.

Work of the Volcanologist

The monograph on "Craters" was continued throughout the month, particular attention being given to dictation of the text to accompany maps, sections and diagrams.

The volcanologist directed a succession of adjustments, tests and changes in the design of the seismoscope now being constructed in the machine shop, and after discovery of the needs of this particular design, a new drawing was made, the instrument was equipped with a levelling table and it was tested on the shaking table.
Ranger Winter has started work using the high-grade lathe in the jeweler shop, and it is expected that his skill as a machinist may be of great value to the Observatory.

A visit to the Observatory by Mrs. Ruth Hampton, Assistant Director of the Division of Territories, Department of the Interior, was of great interest to the staff. Mrs. Hampton remained in the park and on the island from February 1 to February 5.

A visit from Engineer Belcher February 26 produced an interesting report on the progress of the survey by US Engineer Corps for lava diversion barriers about 10 miles long to protect Hilo and the Waiakea settlement. Mr. Belcher is enthusiastic and thinks that the barrier would be effective.

Work of the Assistant Seismologist

Mr. F.A. Wassehe kept up the seismogram readings, measurements of tilt and of horizontal angles, and carried on other routine work as usual.

February 9-10 Mr. Hugh Lytle, Associated Press representative in Honolulu was at the park and spent some time in the Observatory library, going over volcano literature with a view to description of the scientific work of Hawaii National Park.

On February 13 Mr. Wassehe prepared 1939 earthquake location maps and plotted thereon January earthquake locations.

February 14 to 16 a special investigation was made of microseisms and their size as compared with a chart prepared by Mr. L.P. Thurston showing times of maximum surf at the bathing beach in Honolulu. There was notably little agreement in the two records, and the times of greatest breaking of the waves at Waikiki in the summer appears to be the time when microseisms are weakest; conversely the winter months when microseisms are strongest appear to be times when the break of the surface is least conspicuous. On February 16 Mr. Wassehe attended the staff meeting of park personnel after return of the superintendent from conferences in Washington. He gave some time to a study of the report of the National Research Council of 1938. On February 17 he made adjustments to the seismograph on Muna Loa and on February 23 went over the telephone line near the summer camp for inspection with reference to time-marking apparatus at the Halemaumau seismograph.

Work of the Assistants

S. Sata and R. Yasumasa continued their usual routines of clerical and outdoor work, and A. Okuda drafted the design for an improved hanging beam earthquake annunciator, which he devoted the remainder of the month to constructing.
Visitors

February 2 - Mrs. Ruth Hampton, Department of the Interior.
February 9 - Mr. Hugh Lytle of the Associated Press.
February 11 - Professor Buhner visiting lecturer on Sociology from the University of Chicago at the University of Hawaii.
February 12 - Professor Porteus and Dr. Herrick, of the Department of Psychology of the University of Hawaii.
February 21, Mr. James Cromwell, economist of New Jersey and Honolulu.

Very respectfully,

T.A. Jagger
Volcanologist

By: [Signature]

H.E. Vaseche
Asst. Geologist
**TRAVEL REPORT**

Paliheula Section, Hawaii National Park for the month of February, 1933

<table>
<thead>
<tr>
<th></th>
<th>This Month</th>
<th>This Travel Year</th>
<th>This Month Travel Year To Date</th>
<th>Last Travel Year</th>
<th>Last Travel Year To Date</th>
<th>Increase for Travel Year</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRIVATE TRANSPORTATION:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cars first entry</td>
<td>364</td>
<td>2766</td>
<td>282</td>
<td>1545</td>
<td>1911</td>
<td>78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cars reentry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Motorcycles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total motor vehicles</td>
<td>364</td>
<td>2766</td>
<td>282</td>
<td>1545</td>
<td>1911</td>
<td>78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons entering via motor vehicles</td>
<td>1280</td>
<td>13780</td>
<td>1110</td>
<td>7726</td>
<td>6055</td>
<td>78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons entering via other private transportation</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Total persons entering via private transportation</td>
<td>1280</td>
<td>13780</td>
<td>1110</td>
<td>7726</td>
<td>6055</td>
<td>78</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>OTHER TRANSPORTATION:</strong></td>
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<td></td>
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<tr>
<td>Persons entering via stages</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Persons entering via trains</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons entering otherwise</td>
<td></td>
<td></td>
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<tr>
<td>Total other transportation</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GRAND TOTAL ALL VISITORS:</strong></td>
<td>1280</td>
<td>13780</td>
<td>1110</td>
<td>7726</td>
<td>6055</td>
<td>78</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>This Year</th>
<th>Last Year</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td></td>
</tr>
<tr>
<td>Automobiles in public camps during month</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Campers in public camps during month</td>
<td></td>
<td></td>
<td></td>
</tr>
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10-1857
(Dec. 1933)

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

Hawaii National Park for the month of February, 1933

<table>
<thead>
<tr>
<th></th>
<th>This Month</th>
<th>This Travel Year</th>
<th>This Month To Date</th>
<th>Last Travel Year</th>
<th>Last Travel Year To Date</th>
<th>Increase for Travel Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Transportation:</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Cars first entry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cars reentry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motorcycles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total motor vehicles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons entering via motor vehicles</td>
<td>10,324</td>
<td>53,940</td>
<td>12,122</td>
<td>61,364</td>
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<tr>
<td>Persons entering via other private transportation</td>
<td>286</td>
<td>1,517</td>
<td>192</td>
<td>1,208</td>
<td>309</td>
<td>.266</td>
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<tr>
<td>Total persons entering via private transportation</td>
<td>10,610</td>
<td>55,457</td>
<td>12,314</td>
<td>62,572</td>
<td>-7,115</td>
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<tr>
<td>Other Transportation:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons entering via automobile</td>
<td>685</td>
<td>2,712</td>
<td>563</td>
<td>3,336</td>
<td>-624</td>
<td>.157</td>
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<tr>
<td>Persons entering via trains</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Persons entering otherwise</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total other transportation</td>
<td>685</td>
<td>2,712</td>
<td>563</td>
<td>3,336</td>
<td>-624</td>
<td>.157</td>
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<tr>
<td>Grand total all visitors</td>
<td>11,295</td>
<td>58,169</td>
<td>12,877</td>
<td>65,908</td>
<td>-7,739</td>
<td>.116</td>
</tr>
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</table>

Automobiles in public camps during month, 
Campers in public camps during month, 

<table>
<thead>
<tr>
<th></th>
<th>This Year</th>
<th>Last Year</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td></td>
</tr>
</tbody>
</table>


United States
Department of the Interior
National Park Service

Status of Personnel

Hawaii National Park for the Month of February, 1939

<table>
<thead>
<tr>
<th></th>
<th>This Month</th>
<th>This Month Last Year</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Appointed</td>
<td>Non-Appointed</td>
</tr>
<tr>
<td>Number of employees beginning of month</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>Number of additions</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>Number of separations</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Number of employees close of month</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>Number of promotions during month</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Aggregate amount of annual leave taken</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Aggregate amount of sick leave taken</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Aggregate amount of leave without pay</td>
<td>0</td>
<td>0</td>
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</table>
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS
Hawaii National Park for the month of February, 1939

<table>
<thead>
<tr>
<th>Description of projects</th>
<th>Percent constructed to date</th>
<th>Percent constructed this month</th>
<th>Percent constructed last month</th>
<th>Probable date of completion</th>
</tr>
</thead>
</table>

NO AUTHORIZED PROJECTS
**Hawaii National Park**

**REPORT OF SALES OF PUBLICATIONS**

**February, 1939**

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td><strong>GOVERNMENT PUBLICATIONS:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On hand beginning of month,</td>
<td>951</td>
<td>138.30</td>
</tr>
<tr>
<td>Received during month,</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Total,</td>
<td>951</td>
<td>138.30</td>
</tr>
<tr>
<td>Sold during month,</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>On hand at close of month,</td>
<td>951</td>
<td>138.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NON-GOVERNMENT PUBLICATIONS:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On hand beginning of month,</td>
<td>13</td>
<td>6.50</td>
</tr>
<tr>
<td>Received during month,</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Total,</td>
<td>13</td>
<td>6.50</td>
</tr>
<tr>
<td>Sold during month,</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>On hand at close of month,</td>
<td>13</td>
<td>6.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash on hand beginning of month,</td>
<td>15.10</td>
<td></td>
</tr>
<tr>
<td>Sales during month,</td>
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<td>0.00</td>
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<tr>
<td>Total,</td>
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<td>15.10</td>
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<tr>
<td>Remitted during month,</td>
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<td>0.00</td>
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<tr>
<td>Balance,</td>
<td></td>
<td>15.10</td>
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</table>
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

<table>
<thead>
<tr>
<th>National Park</th>
<th>Month of</th>
<th>1939</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Park revenue on hand beginning of month</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Received</td>
<td>0.00</td>
<td>12.00</td>
</tr>
<tr>
<td>Remitted</td>
<td>0.00</td>
<td>22.00</td>
</tr>
<tr>
<td>On hand close of month</td>
<td>0.00</td>
<td>22.00</td>
</tr>
<tr>
<td>Park revenues received this year to date</td>
<td>95.00</td>
<td>173.00</td>
</tr>
<tr>
<td>Park revenues received last year to date</td>
<td>173.00</td>
<td>335.00</td>
</tr>
<tr>
<td>Increase</td>
<td>-77.00</td>
<td>-162.00</td>
</tr>
<tr>
<td>Percent of increase</td>
<td>-4.84</td>
<td>-4.84</td>
</tr>
</tbody>
</table>
Memorandum for the Superintendent:

Subject: Narrative report for February, 1939.

The foregoing report covers the activities of the Ranger division for the month of February, 1939. The Rangers individual reports are attached.

010 Introduction

The most outstanding event of the month was the completion of the Advanced Red Cross first aid course, conducted by Captain Johnson, Physician of the Kilauea Military Camp. This was a very interesting and instructive course, and was attended by fourteen members, from the Park and local CCC personnel.

It is recommended that a course in traffic control, legal duties and responsibilities, presentation of cases in court, and investigation and presentation of evidence be given to the Ranger Division. This is a matter of great importance in performing duties as Ranger, and also as Deputy Sheriff. I believe the Hilo Police Department or the Department of Justice would co-operate in furnishing instruction for such a course.

021 General Weather Conditions

Rainy weather was general in both sections of the Park, and resulted in some damage to roads and trails. The summit of Mauna Loa has been covered with snow through January and February. Rainfall in Headquarters area was ___ inches. Haleakula section on Maui had ___ inches. Rain Gage at the 6,600 foot elevation showed ___ inches.

110 Status of Work

Several projects covering maintenance, quarters operations, and other activities slated, are progressing as rapidly as possible. The inventory of small tools and equipment is about 95% complete.
120 Park Inspections

Daily patrols of the Kiluea area, and all work in progress were made by Rangers, and bi-weekly trips were made to Elevation 6,600 on Mauna Loa Truck Trail, Hilina Pali, and Napau. One trip was made to the 10,000 foot rest house during the month, one trip along the west and south boundaries trail. Only three goats were seen during the boundary trip, and very little evidence of browsing was observed.

160 Equipment and supplies

Fourteen (14) one quart carbon-tetrachloride fire extinguishers and one Frigidaire refrigerator were received.

210 Maintenance

The necessary repairs on roads, trails, and telephone lines by CCC personnel were continued during the month.

220 Improvements

Repairs were made to the 10,000 ft. rest house on Mauna Loa. Canec was used on the south inside wall, making the shelter much warmer. One four burner kerosene stove was taken to replace the one worn out.

Park residence #16 is now ready for occupancy, having been thoroughly repainted, and the floors refinished, all work being done by Park labor.

320 Co-operation with other agencies

Excellent co-operation was furnished the National Park Service by Mr. Bryan of the Territorial Forestry Service, by allowing the Park to cut the dead and affected trees on the Forest Reserve along the Mamalahoa Highway for firewood.

410 Ranger, Naturalist and Guide Service

All regular and special hikes and tours were conducted by the Ranger division during the month.

460 Birds

Mr. Paul Baldwin of the University of Hawaii spent several days in the Park in continuation of his bird life studies.

610 Police Protection

Daily patrols were made by Rangers of roads, and trails.

Seven boys were brought into the office by Ranger Olson, with truck partly filled with plants, ferns and lava specimens.
They were taken before Mr. Moomaw and made to replace them in their original position.

Seven persons were warned for minor park violation during the month.

Investigation of accident in Hilo by Ranger Minter, alleged to have been caused by local CCC truck driver resulted in clearing driver of all responsibility for causing the accident.

The Chief Ranger made various inspections over the Park for main protection activities, dividing the park into three patrol districts, and assigning one ranger to each district.

630. Fire protection
The usual quarterly Fire hazard inspection was conducted during the month.
The fire atlas was completed and mailed.
The fire suppression manual was completed and distributed to all concerned.

640 Destruction of predatory animals
Eleven goats were destroyed by rangers during th month.

650 Signs
A meeting of the Sign Committee was held for discussion of of road and trail signs, and information compiled for same.

900 Miscellaneous
District Ranger and Mrs. J.A.Peck left the Haleakula section of the Park for the mainland on February 23rd, to report for transfer to Sequoia National Park.
Assistant to The Superintendent and Mrs. B. F. Moomaw, Jr., left February 28th, for the mainland on a well deserved vacation.

Respectfully submitted,

[Signature]
Joseph H. Christ, Chief Ranger.
Memorandum to the Superintendent.

Subject: Rangers individual requirements.

Ranger: Minor.

Mauna Loa had to be repaired = CCC?

Conf. It.

Regarding construction of two more stalls for stable. This is not necessary at present, for its very seldom we have over 4 animals on patrol trips, and animals on these islands are not stable (there)

very few animals you can get to into a stall.

Ranger: Schulz

White Wing Patrol: Last week was an unusual. Norman Kamwashi will work out which dog works the best. This will be corrected in time.

Revised Tank Telephone Director:

When this was revised a copy to each individual was issued.
Telephone switches found close
that the patrolling ranges should be
seen that each phone is working and
switches are kept open.

Yanks at the lava tube, this is also
the patrolling ranges duty, to see that
fences are close, and doors are closed.
The spring fence for women told
has been built, and new seals has
been placed, as soon lasoch has
time he will install other.

Exhaust frames in the case of #1140
this can will be turned in this month;
and our hovings will be done.

Lock - Mauna Loa trench rail and
lava tube shelter. This will be corrected
when Jenny comes back.

[Signature]
[Chief]
MONTHLY REPORT
JANUARY 1939
February 14, 1939

MEMORANDUM FOR THE DIRECTOR:

There follows the report of activities in Hawaii National Park for January, 1939.

O00 - General

020 - General Weather Conditions

The weather was generally severe with much rain and a storm on the 26th which did considerable damage to the telephone lines, trees and road shoulders. The summit of Mauna Loa has been covered with snow throughout the month, and on the 16th the snow line extended down to approximately the 8000 foot level. Maximum wind velocity at headquarters was 56 mph on the 26th and at Haleakula a very high wind was reported on the same day by the district ranger. Rainfall was as follows: Kilauea 18.01 inches, 6600 foot elevation on Mauna Loa, 11.09 inches and Haleakula 3.53 inches.

100 - Administration

110 - Status of Work

All work was current throughout the month. The revised master plan for Hawaii was returned to San Francisco on the 12th. On the 25th Chief Clerk Higashida left for the mainland where he will attend the chief clerk's conference in Washington on February 15.

120 - Inspections by:

121 - Acting Superintendent: The acting superintendent made routine inspections of all park and other projects.

123 - National Park Service officers: B.L. Douglas, who had been in the park since December auditing park and CCC accounts, left on the 13th.

124 - Other Interior Department Officers: Mrs. Ruth Hampton, of the Division of Territories and InsularPossessions, who is making an extended study of conditions in the islands, visited the park on the 26th. She and her party were taken through the park by the acting superintendent.

125 - Other governmental officers: Federal Judge and Mrs. Jeremiah Neterer of Seattle, were visitors in the park on the 17th. US Attorney
CORRECTION

THE PRECEDING DOCUMENT(S) HAS BEEN REPHOTOGRAPHED TO ASSURE LEGIBILITY
SEE FRAME(S) IMMEDIATELY FOLLOWING
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

HAWAII NATIONAL PARK

FILE NO.

HAWAII NATIONAL PARK

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.

ARNO B. CAMMERER,
Director.
MEMORANDUM FOR THE DIRECTOR:

There follows the report of activities in Hawaii National Park for January, 1939.

000 - General

020 - General Weather Conditions

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121 - Acting Superintendent: The acting superintendent made routine inspections of all park and other projects.

123 - National Park Service Officers: B.L. Douglas, who had been in the park since December auditing park and CCC accounts, left on the 13th.

124 - Other Interior Department Officers: Mrs. Ruth Hampton, of the Division of Territories and Insular Possessions, who is making an extended study of conditions in the islands, visited the park on the 26th. She and her party were taken through the park by the acting superintendent.

125 - Other Governmental Officers: Federal Judge and Mrs. Jeremiah Neterer of Seattle, were visitors in the park on the 17th. US Attorney
400 - Flora, Fauna, and Natural Phenomena

410 - Ranger, Naturalist and Guide Service

The ranger department and the acting superintendent continued to conduct lectures and other naturalist activities.

Paul Ernest Schulz, former museum assistant at Lassen, entered on duty as ranger January 7.

420 - Natural Phenomena

A detailed report of the activities of the Volcano Observatory is attached.

500 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

Travel to Kilauea amounted to 12,091 persons as compared with 13,650 for January 1939, and at Haleakula the district ranger reports 2655 visitors for that area as compared 6615 for last January.

530 - Visitors

January 12 - Mr. Addison Kirk, chairman of the Hawaii Tourist Bureau and George T. Armittage, executive secretary, overnight.

January 21 - Sg. Piero Ghiglioni, newspaperman from Torino Italy, accompanied by Sg. T. Montanari, Italian consul for the territory. They were taken up the truck trail by the acting superintendent.

January 23 - D.H. O'Connell of New York City, attorney for S.H. Kress & Company, overnight. He was taken around the park by the acting superintendent.

600 - Protection

Six soldiers who had been found with maio (false sandalwood) in their possession were turned over to the military authorities for discipline.

On January 27 a theft was investigated at the CCC camp. It was found that the boy who claimed to have lost the money had spent most of it himself, and had the remainder at home.

Albert McKenzie, driver of the Star Route mail truck which serves the park, was convicted of theft of US mail and sentenced to imprisonment for two years. His apprehension along with two other similar cases within the past three months should stop the frequent loss of mail reported by residents in this district, including park personnel.
700 - Activities in Archeology

Ranger Powers of the Haleakala section, in company with Dr. Emory of the Bishop Museum, discovered what is believed to be the second largest Polynesian adze quarry known, in Haleakala crater. Nothing will be done toward removing any of the specimens until further research is completed.

900 - Miscellaneous

900 - A copy of the camp director's monthly report is attached.

Anna Searle, who was temporary clerk-telephone operator during the summers of 1936 and 1937, was married to Mr. Fred Helbush of Honoa Plantation, January 21. This was a double wedding, Miss Searle's sister, Gladys and Mr. Helbush's brother Eugene, being married at the same ceremony.

B.F. Hoomaw, Jr.,
Acting Superintendent
Wild pig damage near Pauahi crater

Dying forest to west of Pauahi crater
Kipuka Nene before goat drive

General view same area six months after drive, showing improved vegetative cover.
**STATISTICAL REPORT NO. 8**

**FINANCE AND ACCOUNTS**

**JANUARY, 1939**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Appropriation</th>
<th>Allotted</th>
<th>Expended &amp; Obligated</th>
<th>Balance</th>
</tr>
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<tr>
<td>1491000</td>
<td>National Park Service, 1939</td>
<td>$55,100.00</td>
<td>$62,781.25</td>
<td>$2,318.95</td>
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<tr>
<td>149/91000</td>
<td>National Park Service, 1938-39 (PEPP)</td>
<td>300.00</td>
<td>202.81</td>
<td>97.19</td>
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<tr>
<td>1481000</td>
<td>National Park Service, 1938</td>
<td>49,432.00</td>
<td>49,367.73</td>
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<td>1471000</td>
<td>National Park Service, 1937</td>
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<tr>
<td>14-1010</td>
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<td>14-445/90654</td>
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<td>12,278.56</td>
<td>12,273.66</td>
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UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

HAWAII National Park for the month of JANUARY, 1933

<table>
<thead>
<tr>
<th></th>
<th>This Month</th>
<th>This Travel Year</th>
<th>Last Year</th>
<th>Travel Year To Date</th>
<th>Increase for Travel Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRIVATE TRANSPORTATION:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cars first entry,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cars reentry,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motorcycles,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total motor vehicles,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons entering via motor vehicles,</td>
<td>11,205  43,616</td>
<td>12,676  49,242</td>
<td>-5726  -1.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons entering via other private transportation,</td>
<td>343  1,241</td>
<td>181  1,016</td>
<td>192  -1.34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total persons entering via private transportation,</td>
<td>11,547  44,759</td>
<td>12,857  50,258</td>
<td>-5601  -1.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHER TRANSPORTATION:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons entering via hotel</td>
<td>444  2,036</td>
<td>793  2,773</td>
<td>-737  -0.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons entering via trains,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persons entering otherwise,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total other transportation,</td>
<td>444  2,036</td>
<td>793  2,773</td>
<td>-737  -0.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRAND TOTAL ALL VISITORS,</td>
<td>12,091  46,792</td>
<td>13,650  53,031</td>
<td>-6239  -1.10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Automobiles in public camps during month,          
Campers in public camps during month,          

<table>
<thead>
<tr>
<th></th>
<th>This Year</th>
<th>Last Year</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td>Number</td>
</tr>
</tbody>
</table>

10-1937 (Dec. 1933)
<table>
<thead>
<tr>
<th></th>
<th>This Month</th>
<th>This Year</th>
<th>Last Month</th>
<th>Last Year</th>
<th>Increase for Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRIVATE TRANSPORTATION:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cars 1st entry</td>
<td>531</td>
<td>2392</td>
<td>260</td>
<td>1333</td>
<td>1069</td>
</tr>
<tr>
<td>Cars reentry</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>80</td>
</tr>
<tr>
<td>Motorcycles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total motor vehicles</td>
<td>531</td>
<td>2392</td>
<td>260</td>
<td>1333</td>
<td>1069</td>
</tr>
<tr>
<td>Persons ent via motor vehicles</td>
<td>2555</td>
<td>11960</td>
<td>1300</td>
<td>6615</td>
<td>5345</td>
</tr>
<tr>
<td>Persons ent via other private transportation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total persons ent via private transportation</td>
<td>2555</td>
<td>11960</td>
<td>1300</td>
<td>6615</td>
<td>5345</td>
</tr>
</tbody>
</table>

**OTHER TRANSPORTATION:**

|           |            |           |            |           |                   |
| Persons ent via stages |            |           |            |           |                   |
| Persons ent via trains  |            |           |            |           |                   |
| Persons ent otherwise  |            |           |            |           |                   |
| Total other transport |            |           |            |           |                   |

**GRAND TOTAL ALL VISITORS:**

<table>
<thead>
<tr>
<th></th>
<th>This Year</th>
<th>Last Year</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Number</td>
</tr>
</tbody>
</table>

- Automobiles in public camps during month. . . . . . . . . . . . . .
- Campers in public camps during month. . . . . . . . . . . . . .
UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK

February 4, 1939

Edward G. Wingate, Superintendent
Hawaii National Park

Dear Mr. Wingate:

The month of January was occupied by progress in improvement of a simple seismoscope, by work on the "crater" manuscript, and by numerous Volcano Research Association conferences. The staff has been busy with completing the records for 1938. The prospective retirement of the volcanologist by government order has raised extremely difficult questions about property for the Hawaiian Volcano Research Association, as they have spent some $260,000 at the Hawaiian Volcano Observatory; the government has not provided fire-proof housing for their records, the publication of the records is dubious, and the pessimism of the association is such that they contemplate withdrawing most of their financial support.

Volcanic Activity of the Month

A feeble earthquake was sharply felt January 15, and there was notable increase of spasmodic tremors during the last fortnight. These originated under Mauna Loa and Hualalai. Distant destructive earthquakes of large size from Chile and the Solomon Islands were registered January 24 and January 29.

The following are the local data for the month:

<table>
<thead>
<tr>
<th>Week Ending</th>
<th>Seismicity</th>
<th>Slides</th>
<th>Crack</th>
<th>Local tremors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 1</td>
<td>4.75</td>
<td>1</td>
<td>0.6 mm</td>
<td>14</td>
</tr>
<tr>
<td>8</td>
<td>9.00</td>
<td>0</td>
<td>1.6 &quot;</td>
<td>32</td>
</tr>
<tr>
<td>15</td>
<td>5.60</td>
<td>1</td>
<td>3.0 &quot;</td>
<td>15</td>
</tr>
<tr>
<td>22</td>
<td>17.75</td>
<td>0</td>
<td>3.0 &quot;</td>
<td>60</td>
</tr>
<tr>
<td>29</td>
<td>20.50</td>
<td>10</td>
<td>3.0 &quot;</td>
<td>45</td>
</tr>
</tbody>
</table>

Work of the Volcanologist

Considerable attention was given during the month to the requirements of the Volcano Research Association in its attempt, which may be unsuccessful, to raise a budget for 1939. A meeting of the directors
was held in Honolulu January 5, attended by the volcanologist. It was decided to turn the Volcano Letter, changed to a quarterly, over to the University of Hawaii. The last five months of 1938 will be published as a single number by the university. There is no money in the Research Association treasury. Among other retrenchments disastrous to the close contact hitherto existing, between the Volcano Observatory and Honolulu, is the withdrawal of a pass from the volcanologist, issued hitherto as a donation to Research Association, by the Inter-Island Steam Navigation Company, owing to a requirement of the Federal Maritime Commission.

The volcanologist continued his work on the manuscript of the monograph for the Geological Society of America on "Origin and Development of Craters," and at the expense of that society, had numerous photostat copies of maps made by a firm in Honolulu.

Owing to the expectation of the withdrawal from the Observatory in August, the volcanologist has been making preliminary inventories of the collections, stock of publications, instruments, machines, cameras, buildings, library collections, furniture, manuscripts and records that are the property of the Hawaiian Volcano Research Association; as well as those which are the personal property of the volcanologist, which he would have to remove, in case he decides to live elsewhere than Hawaii.

The problem of a division of property, thrown in to a common service of the Hawaiian Volcano Observatory for 26 years by 7 different organizations, which have placed the entire responsibility of publication of results eventually upon a single individual, who is at present preparing and financing such publication without any financial assistance for publishing from the government, is a puzzling one.

The Volcano Research Association, whose scientific representative he is, attempted in the spring of 1938 to raise from the community $15,000 a year for 10 years for this publication program. The carrying out of this difficult plan, was abruptly defeated by the government order of "retirement" which had been preceded by the official dictum of the United States Civil Service Commission to the Secretary of the Interior (September 17, 1936) "no present obstacle to his indefinite retention," but not entitled to any annuity. This dictum had been accepted.

The government has spent approximately $300,000, largely salaries, as its contribution since 1919, to the accumulation of volcanology records. It is difficult for the volcanologist to envisage sudden interruption of his part in salvaging the records for the service of world science, wherein the government as scientific sponsor has a larger liability than any Hawaiian organization.
Further construction of model seismoscopes in the shop has proceeded with steady improvement that is resulting in simpler instruments of increasing sensitivity. The shaking table, for making artificial earthquakes in the shop, wherewith to test instruments, has been improved. A number of addresses were given during the month and the observatory was honored by a visit from Mrs. Ruth Hampton of the Division of Territories.

Work of the Assistant Geologist

Mr. H.H. Waesche continued his usual routine of operating the seismographs. The new seismograph on Mauna Loa is giving valuable results. Mr. Waesche finished plotting all the charts of 1938 showing tilt, crack openings, horizontal angles, levels and earthquakes and prepared new blanks for charts of the coming year. About 20 visitors came to the observatory. The constants of the Besch-Omori seismograph were transmitted at their request to the International Geodetic and Geophysical Union at Strasbourg.

On January 2 gas samples were collected and transmitted to the University of Hawaii. January 4 to 5 an arduous trip with Mr. Baldwin, ornithologist, was made on foot through the jungle east of Kilauea Iki, having in view the mapping of cracks of the rift. The journey was from Makalawena to the Hilo highway near Glenwood, the explorers cutting their way through steaghorn and fern and swamp. On January 7 Mr. Waesche went to Hilo to meet the geologist-ranger Schulz and his wife. January 10-12 alterations and corrections were made on the timing device for the pit seismograph and the radio time receiver. January 20-27 mechanical jobs were done helping rangers to make some alterations, in the telephone circuit along the Chain-of-Craters, and in repairing the anemometer at the observatory.

Work of the Assistants

S. Sato worked on drafting maps, writing manuscripts, filing and cataloging and assisting in the outdoor routine.

H. Yasumaka continued his crater routine and his various responsibilities as janitor and assistant with instruments.

A. Okuda worked most of the month on improvements in the seismoscope models, one of which was taken to Dr. Eller of the Physics Department, University of Hawaii, for tests.

Lectures and Publications

The following papers were published:


Chester Wentworth "Ash Formations of the Island of Hawaii"

Addresses were made as follows:

January 9 - The Idea Behind A Schilngage of Men, YMCA, Lihue, Kauai.
January 11 - Our Hawaiian Volcanoes, Visitors' Club, Hawaiian Tourist Bureau, Honolulu.
January 23 - The Association and the Individual, YMCA, Honolulu.

Very respectfully,

T. A. Jaggar
Volcanologist
REPORT OF CAMP DIRECTOR, FRANK O. HUSTON, CCC EMP TO SUPERINTENDENT EDWARD G. WINGATE, HAWAII NATIONAL PARK FOR THE MONTH OF JANUARY, 1939.

During the month we enrolled 17 new enrollees and one project assistant on Maun. 10 boys were given administrative or dishonorable discharges most of them for AWOL.

There was a total of 271 man days lost by sickness during the month, 65 man days by operations, 45 man days by inoculation, the rest for colds and other sicknesses. There were five operations for appendicitis and one for hernia. The Doctor reports "the camp is in a clean and orderly condition". I am sure the camp is constantly improving in cleanliness, health and safety.

There was only one safety meeting this month as we have our meetings on the first and third Wednesday of each month and a large number of enrollees were still on their six day leave. The safety assistant reports the camp following all safety regulations.

The Project Superintendents report shows a daily average of 145 enrollees released to him during the month of 21 working days. There was 316 man days lost in conditioning new enrollees.

163 man days used on 27-P Telephone Line Maintenance, this was due to replacing poles on two lines.

358 man days were used on 227-R Truck & Trail maintenance on the Manna Loa Truck Trail.

153 man days were on 250-P, Removal of Exotics, in removal of Jerusalem cherries in the Giant Loa area.

376 man days were used on 307, Landscaping School Grounds.

563 man days were used on 305 Camp Construction and Construction of Personal Cottages. Cottage number 3 is 100% completed, cottage number 5 will be completed by March 1st and forms started on cottage number 1.

229 man days were used on HAW-U-5, Incinerator.

401 man days were used on K-J, Boundary Trail. 12 miles completed.

The project Superintendent reports "the various projects are progressing satisfactorily".

The recreational activities continued during the month. The 150 lb. Basketball team were undefeated in division "A" of the HBO League and the Junior team in second place.

Mr. Douglas, Field Auditor from Washington visited the camp during the month auditing the books and checking the CCC materials. We were very glad to have Mr. Douglas with us.
Hawaii National Park, OCO staff camp, Haleakala Section.

This camp now has its full quota of 25 men, foreman and cook. 324 man days were worked during the month, nine days were lost due to rain. The last water tank was erected. Siding in barracks 2; 3 and 4 was covered with cane and the excavation of the ranger cottage 90% completed.

Your Camp Director made one trip to Maui during the month Mr. Douglas the field auditor, accompanying him.

Respectfully submitted,

Frank O. Huston,
Camp Director, OCO NPS.
### UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

#### REPORT OF PARK REVENUES

<table>
<thead>
<tr>
<th>Hawaii National Park</th>
<th>Month of January, 1939</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Park revenue on hand beginning of month</td>
<td>0.00</td>
</tr>
<tr>
<td>Received</td>
<td>25.00</td>
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<tr>
<td>Total</td>
<td>25.00</td>
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<tr>
<td>Remitted</td>
<td>25.00</td>
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<tr>
<td>On hand close of month</td>
<td>0.00</td>
</tr>
<tr>
<td>Park revenues received this year to date</td>
<td>96.00</td>
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<tr>
<td>Park revenues received last year to date</td>
<td>175.00</td>
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<tr>
<td><strong>Change</strong></td>
<td><strong>77.50</strong></td>
</tr>
<tr>
<td><strong>Percent of increase</strong></td>
<td>0.005</td>
</tr>
<tr>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
<td>--------</td>
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<tr>
<td>GOVERNMENT PUBLICATIONS:</td>
<td></td>
</tr>
<tr>
<td>On hand beginning of month,</td>
<td>967</td>
</tr>
<tr>
<td>Received during month,</td>
<td>0</td>
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<tr>
<td>Total,</td>
<td>967</td>
</tr>
<tr>
<td>Sold during month,</td>
<td>6</td>
</tr>
<tr>
<td>On hand at close of month,</td>
<td>961</td>
</tr>
</tbody>
</table>

| NON-GOVERNMENT PUBLICATIONS:                                          |        |       |
| Portfolio on Natl. Park & Monument system                             |        |       |
| On hand beginning of month,                                           | 17     | 8.50  |
| Received during month,                                                | 0      | 0.00  |
| Total,                                                                | 17     | 8.50  |
| Sold during month,                                                    | 4      | 2.00  |
| On hand at close of month,                                            | 13     | 6.50  |
| Cash on hand beginning of month,                                      |        | 14.60 |
| Sales during month,                                                   |        | 4.50  |
| Total,                                                                |        | 19.10 |
| Remitted during month,                                                |        | 4.20  |
| Balance,                                                              |        | 15.10 |
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

STATUS OF PERSONNEL

<table>
<thead>
<tr>
<th>Hawaii National Park for the Month of January, 1939</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th></th>
<th>THIS MONTH</th>
<th>THIS MONTH LAST YEAR</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>APPOINTED</td>
<td>NON-APPOINTED</td>
</tr>
<tr>
<td>Number of employees beginning of month</td>
<td>23</td>
<td>0</td>
</tr>
<tr>
<td>Number of additions</td>
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<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>0</td>
</tr>
<tr>
<td>Number of separations</td>
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<td>0</td>
</tr>
<tr>
<td>Number of employees close of month</td>
<td>22</td>
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</tr>
<tr>
<td>Number of promotions during month</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Aggregate amount of annual leave taken</td>
<td>6</td>
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</tr>
<tr>
<td>Aggregate amount of sick leave taken</td>
<td>42</td>
<td>0</td>
</tr>
<tr>
<td>Aggregate amount of leave without pay</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Hawaii National Park for the month of January, 1939

<table>
<thead>
<tr>
<th>Description of projects</th>
<th>Percent constructed to date</th>
<th>Percent constructed this month</th>
<th>Percent constructed last month</th>
<th>Probable date of completion</th>
</tr>
</thead>
</table>

NO AUTHORIZED PROJECTS
February 2, 1939.

Memorandum for the Superintendent:

Subject: Narrative Report for January 1939.

The foregoing report covers the activities of the Ranger Division for the month of January, 1939. The Ranger's individual reports are attached.

010 Introduction

No event of unusual importance has occurred during the month.

021 General Weather Conditions

Weather in the park during January was generally severe with much rain and a storm on January 26th which done some damage in this area to telephone lines, trees and road shoulders. The Mauna Loa Summit has been covered with snow throughout the month and on one occasion, the snow line reached down as far approximately 8,800 feet. Rainfall in the headquarters area was registered as 0.34 inches for the month and 11.09 inches on the El. 6,600 feet rain gauge.

120 Park Inspections

Daily patrols were made by Rangers of the Kilauea area and all work in progress. Bi-weekly trips were made to El. 6600 Mauna Loa and Hina Pali. Two trips were made to Mauna Loa Summit during the month.

125 Other Governmental Officers

Federal Judge Jeremiah naterer of Seattle, stayed several days in the park while on this Island on business.

US Dist. Atty., Judge and Mrs. Stainback of Honolulu, spent several days in the park on vacation.

Mr. H. L. Douglas, CCC auditor, completed his work in the park and left for the mainland the latter part of the month.
180 Equipment & Supplies
1 Chevrolet Sedan – for Haleakula Section

210 Maintenance

Repair and repainting of quarters #15, the house of the park naturalist was begun during the month. The repair of the park telephone line by CCC was continued. Work was also done on Hulina Pali and Mauna Loa Truck Trail by CCC.

400 Flora, Fauna & Natural Phenomena

37 species of plants have been collected and dried by the wildlife division. The species collected were not previously contained in the park herbarium.

410 Ranger, Naturalist & Guide Service

All regular and special tours and hikes were conducted by the rangers during the month.

530 Visitors

A group of 36 Junior Girl Reserves from Hilo High School were conducted on two hikes in the park, Jan. 21 & 22.

610 Police Protection

6 soldiers were caught with stolen wood on Jan. 23rd, by rangers. The case was turned over to the Military authorities for disposal. The soldiers names were, Pvt. Fisher, Pvt. Bergman, Pvt. Oliver, Pvt. Peck, Pvt. Leacock and Pvt. Wallace.

A soldier by the name of Pvt. "Cook" McGregor, H. Q. 21st. Schofield, was picked up at Uwekahuna Museum on Jan. 11th and taken to K.M.C. hospital. He had fallen over a small cliff and suffered abrasions and cuts to the face and hands. As he was intoxicated, his case was turned over to Military authorities.

On Jan. 27th a theft was investigated at the CCC Camp. It was found that the boy who claimed to have lost the money had spent most of it and had the remainder at his home. A report of this affair was submitted by Ranger Olson.

Albert McKenzie, mail driver for the Post Office in the park was convicted of theft of US mail, during the month, and sentenced to imprisonment for 2 years. "His apprehension along with two other similar cases within the past 3 months should stop the frequent loss of mail reported by residents in this district including park personnel.

Several warnings were given to speeders in the park by rangers.
640 Destruction of Predatory Animals

24 wild goats and 2 pigs were destroyed during the month.

900 Miscellaneous

Ranger and Mrs. F. E. Schulz arrived in the park Jan 7th, from California for duty here.

The Annual Forestry Report was submitted during the month.

Centerlining of portions of the Hamalahoa Highway between the park and Hilo was completed during the month. This is considered an aid to driving on this road due to the narrow width and many curves.

Respectfully submitted

Joseph H. Christ
Chief Ranger.
Memorandum to Superintendent Wingate through office of the Chief Ranger:

Check of travel shows 531 cars and 2655 visitors were in the Haleakala Section this month. An increase of 8% over the record for last month is shown.

The last water tank for the CCC camp has been installed. No pipe connections have yet been put in because of lack of thread cutting die for 1 inch pipe.

Excavation for the ranger residence is approximately 80% completed.

The ranger reports, weather report, narrative report, and travel reports are enclosed.

J. A. Peck
District Ranger
Memorandum to Superintendent Wingate
through office or the Chief Ranger:

The following report of the Haleakala Section for the month of January, 1939, is respectfully submitted:

000 General

010 Introduction.
Progress of work has been slower than usual this month due to prevailing bad weather.

020 General weather conditions.
Rainfall at the Observation station amounted to 5.53 inches this month. The prevailing wind direction was from the northeast. There were 9 clear days during this month.

100 Administrative

120 Park Inspections by Other Interior Department Officers.
The Haleakala Section was inspected by Camp Director
F. C. Huston of the Hawaii National Park CCC camp on
January 16 to 20.
The Haleakala Section was visited on January 16 and 17 by Inspector Douglas.

150 Equipment and Supplies
One kerosene room heater was received January 12.
Chevrolet sedan, No. 13866 received January 21.

200 Maintenance, Improvements and New Construction.

230 New Construction.
Excavation for the basement and foundation walls for the ranger residence building is approximately 50% completed. Second 5000 gal. water tank to store water from the roof of the mess hall and one barracks building was installed.

500 Use of Park Facilities by the Public.

510 Increase or decrease in Travel
531 cars and 2855 visitors were in the Haleakala Section during this month, showing an increase of 6% over the record for last month.

J. A. Peck
District Ranger