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

FILE NO. 143

MONTHLY REPORT

FOR

JANUARY, 1933

4636

IMPORTANT

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HORACE M. ALBRIGHT,
Director.

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DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

February 2, 1926.

The Director,
National Park Service,
Washington, D. C.

Dear Mr. Director:

Following is the monthly report of activities for Yellowstone National Park for the month of January, 1926.

000 - General

010 - January, 1926, will long be remembered by park residents as the month of the heavy winds. There was hardly a day during the entire month when there were not violent winds which whipped the loose snow into huge drifts in many points in the park. This may prove to be of benefit during the spring run-off as the heavily packed snow in the timber will be slow to melt. It was necessary to run the new snow plow only three days during the month in order to keep open the roads around Mammoth and the road between Mammoth and Gardiner. Without this snow-plow it is doubtful if the work could have been accomplished as our other available machinery would not have handled it. With the wind, there was no time during the month that we could not travel about Mammoth or negotiate the road between Mammoth and Gardiner. The placing of many additional snow fences around Mammoth and on the Mammoth-Gardiner road also aided in cutting down the huge drifts which are usually found at some of these localities.

The epidemic of flu was not so bad during January as during the previous month, although quite a few of our people suffered from the disease. By the end of the month the epidemic had practically subsided.

020 - General Weather Conditions

(A general summary of weather conditions will be found at the back of this report.)

021 - In the Park

High winds prevailed nearly all month with generally cold and snow every day. The road from Mammoth to Lower Falls was opened for the Bureau of Public Roads by Harrison-Lindsay, contractors, on January 22 and was still open at the end of the month. It is expected that this road will be closed by drifting snow very shortly. Due to the high winds, it was necessary to keep the roads around Mammoth open by using the snow-plow.

At the Bechler River Ranger Station during the month of January a total of 180.5 inches of snowfall was recorded. This was 130 inches more than fell during January last year. The snow on the ground at this station at the end of the month was 80 inches.

It is interesting to note that on the night of January 19 thirty inches of snow fell overnight at the South Riverside cabin and again on January 22 thirty-one inches fell overnight on the Continental Divide between Old Faithful and Shoshone Lake.

The following tables give comparative snow depths for Yellowstone National Park, according to drainage, at the close of January 1951, 1952 and 1953. (Snow depths are given in inches.)

Yellowstone River Drainage	1951	1952	1953	[illegible]
Buffalo Ranch	8	22	16	[illegible]
Canyon	15	38	56	[illegible]
Cooke	17	32	25	[illegible]
Cold Creek	15	34	34	[illegible]
Mammoth	9	21	10	[illegible]
Upper Slough Creek	19	34	54	[illegible]
Lower Slough Creek	18	34	34	[illegible]
Tower Falls	14	34	30	[illegible]
Hellroaring	8	23	26	[illegible]
Soda Butte	16	22	14	[illegible]
Thorofare	16	30	38	[illegible]
Miller Creek	16	20	35	[illegible]
Upper Miller Creek	---	23	40	20
Lake	11	30	31	20
Cabin Creek	14	26	17	8
Park Point	---	24	16	12
Cache Creek	24	---	46	[illegible]
Crystal Springs	11	30	30	—

Madison River Drainage				
Old Faithful	14	41	46	[illegible]
Fountain	14	18	38	[illegible]
Madison Junction	14	20	24	[illegible]
~~Riverside~~	16	36	35	[illegible]
Norris	10	30	40	—
Grayling Creek	---	35	24	[illegible]

Snake River Drainage	1931	1932	1933	
Two Ocean Plateau	40	54	[illegible]	[illegible]
Snake River	25	56	51	[illegible]
Snake River (7 S.1.)	30	72	90	[illegible]
Pink Creek	—	38	52	[illegible]
Fox Creek	26	38	52	[illegible]
Aster Creek	28	68	74	[illegible]
Bechler River	32	65	86	[illegible]
Cascade	44	71	85	[illegible]
Boundary Creek	—	59	65	[illegible]
South Riverside	25	69	71	[illegible]
Gallatin River Drainage				
Gallatin Station	18	34	37	17
Fountain	—	—	—	[illegible]
Bear Creek				25
Daly Creek				[illegible]
Shoshone River Drainage				
Sylvan Pass R.S.	2	29	30	21
Sylvan Pass	—	—	—	[illegible]

022 - Approaches to the park

The south, west and Gallatin approach roads are closed due to snow. The Livingston-Gardiner road was in good condition the entire month. The road from Cody to the Sylvan Pass Ranger Station is open except for the last nine miles to the park boundary line. Another fairly heavy snowfall will close this road for a distance of sixteen miles from the ranger station.

023 - In Nearby States

High winds, snow and cold weather were prevalent in the surrounding states during January.

100 - Administration

110 - Status of Work

Superintendent Tall remained in California on furlough leave until about the middle of January, after which he began an inspection of proposed parks and monuments which required the remainder of the month. He is due to return to his winter headquarters office in Denver about the middle of February and we will arrange for a stenographer to be there at that time to handle his work.

Assistant Superintendent Edwards was acting superintendent in Mr. Hall's absence.

Very little furlough leave was taken during the month, although a number of employees were absent for a day or two at a time due to sickness. Practically all work was kept current.

The temporary services of Mrs. Viola Hutchinson terminated at the close of January 14 and Miss Verna M. Roe entered on duty in her position on January 16. The position (No. 8) has again been made permanent by Presidential proclamation.

The necessary papers were sent in during the month recommending the appointment of Edwin G. Stevens to position No. 18 vacated by the resignation of Clerk Miriam Perkan Aiton. Presidential authority was received to fill this position permanently.

120 - Park Inspections By:

121 - Acting Superintendent

Acting Superintendent Edwards made the usual inspections of activities around headquarters and made trips outside the park as follows:

January 5 - To Livingston with Messrs. Joffe and Dudley to attend the funeral of the father of L. A. Flint. Returned to Yellowstone for night.

7 - To Livingston in afternoon; returned to Yellowstone afternoon of January 9. Attended Rotary luncheon January 8.

10 - To Helena, Montana, with Messrs. Joffe and Dudley to attend the meeting of the Montana Sportsmen's Association which was held on January 10 and 11. He attended the Rotary luncheon on January 11, returned to Yellowstone the forenoon of the 12th.

15 - To Livingston, leaving on the 16th for Missoula, Montana, to attend the Regional Federal Forest Protection Board meeting; on 17th conferred with Forest Service officials on park matters, attended the Kiwanis noon luncheon and returned on the afternoon train to Livingston; spent 18th in Livingston attending to park matters; attended monthly meeting of the American Legion Post in the evening; returned to headquarters at noon on the 19th

21 - To Livingston, returning the following day.

27 - To Livingston, returning the same evening.

125 - Other Governmental Officers

C. F. Capes, in charge of the Bureau of Public Roads Activities in Yellowstone Park, arrived from Denver on the 25th and made an inspection of some of the Bureau's work at Tower Falls. He departed via Gardiner on the 31st.

Kenneth F. Meahan, U. S. Game Protector, Billings, Montana, arrived in the park via Gardiner on the 30th for a ski trip through the park to look over game conditions.

140 - Labor Situation

The contractor on the Golden Gate job continued operations throughout the month, which provided employment for a number of men residing in Gardiner and Livingston and aided considerably in the relief of a distressing situation in both of these communities. Our own operations were performed with the minimum of personnel, consisting almost entirely of permanent employees. We have received an unusual number of applications for employment and it appears as if our employment situation will be extremely serious next summer with a decrease of appropriations and more men seeking employment than in previous years.

150 - Equipment and Supplies

Five carloads of soft coal, one carload of hard coal and one carload of fuel oil were received in January. A shipment of pipe and a shipment of hand operated gas pumps were also receiving during the month. Commissary activities were largely confined to inventory work and rearrangement of supplies.

160 - Status of Alienated Lands

No attempts were made during the month to purchase the private lands in the section added to the park by Presidential proclamation of October, 1932.

During the month we received a copy of the opinion from the Solicitor permitting the closing of this new park area to hunting, which opinion will be of extreme value to us in our game management. The opinion was dated December 27, 1932.

On January 9 we received word from our Washington office that the Assistant Secretary, on January 4, 1933, accepted the deed dated October 14, 1932, excepting 30.2 acres of land from the Game Preservation Ranch property. This is the land occupied by Albert Hoppe, over which there was considerable controversy.

170 - Plans, Maps and Surveys

Engineering activities consisted almost entirely of office work in connection with working plans and estimates. One map, relative to additions to the north boundary of the park, was prepared for the ranger department and a map of the Norris thermal area was partially prepared for the naturalist division. A study of snow depths on the proposed high line Gardiner-Mammoth road was started, but indications of continued and heavier snowfall caused it to be abandoned until the following month.

180 - Circulars, Placards, Publicity Bulletins, etc.

No circulars or Nature Notes were issued during the month. The results from a questionnaire sent out to those on the mailing list for Nature Notes showed that there were not a sufficient number willing to pay for this publication to make it profitable in event a charge was to be made, and it has been decided to continue Nature Notes as a free publication and retain the mailing list at about seven or eight hundred. However, an organization was formed to help build up the Yellowstone Library and to handle funds received from the sale of publications, in compliance with instructions from Washington.

Three special stories on the park were furnished to the Associated Press in Helena and the United Press in Butte for national distribution, while several other articles were furnished to the Livingston papers. A 2200 word article on the park for the Home Geographic Monthly was prepared and sent in for future publication, together with a number of photographs to illustrate it. Quite a number of photographs have been sent out to newspapers, writers, etc., for publicity purposes.

Assistant to the Superintendent Joffe showed five reels of 16 m.m. motion pictures of park wild life before the Montana Sportsmen's Association in Helena on January 10, to about 300 veterans and employees of the Fort Harrison Veterans' Hospital near Helena on January 11, and to about 150 members of the Livingston Post of the American Legion on the 18th. These pictures were very well received and several requests were forthcoming for future showings of the pictures.

200 - Maintenance, Improvements and New Construction

210 - Maintenance

Maintenance activities were confined to snow removal, exceptionally high winds and constant snow flurries making it necessary to clear the roads around headquarters approximately every other day.

ESO - Improvements

Shops - During the month of January, there were repaired twenty trucks of varying sizes and one passenger car. In addition to our own equipment, several Bureau of Public Roads trucks were kept in repair and operation in connection with the Bureau of Public Roads'contract underway.

One Dodge two-ton truck was considerably damaged in a fire at Gardiner. This truck will be condemned and used for parts on like trucks, as it is more economical to do this than to buy replacement parts for it. The details of this fire and damage to truck were contained in a separate report.

Besides our usual repair work, the remodeling and installing of our stock room has been completed and now we have an up to date stock room with all stock under lock and key. One man in the garage has been detailed as parts man, and he also keeps the cost books of the garage. This employee also works part time in the garage on other work. An inventory of all parts was made the first week in January and the cost books balanced as of January 1, 1935.

Our cost keeping system now combines all of the essentials of the system as recommended by Field Headquarters and is practically the same system which we have had in effect in the Mammoth garage for over a year and a half.

The Master Mechanic was busy a few days during the month in operating the Knoxo snow-plow on the roads and streets at Mammoth and to Gardiner in keeping them free of drifting snow.

Electrical Department - Chief Electrician Dale carried on all of the maintenance work in this department during the month. The power plant was operated as usual with three operators on duty. Electrician Dale was on leave from January 18 to noon of the 30th.

The maintenance work in this department consisted principally of minor repairs and changes in telephone and electrical wiring and street lighting. As there are more than fifty buildings at Mammoth, Mr. Dale was kept rather busy. A considerable number of the lights on the streets of the parade ground have been eliminated during the winter in order to hold down on our electrical consumption.

All field telephones (for fire equipment) were inspected and repaired and are now ready for use. Mr. Dale also spent some time connecting up all of the thermostats and electrical boiler controls to the two new boilers in the bachelor building. The boilers are now in use and are working very well.

Painting Department - During January the work of this department was carried on entirely by Master Painter Tompkins. The work consisted of minor painting jobs in buildings at Mammoth.

Carpentry Department - Master Carpenter [illegible] Bowman and [illegible] Bowman [illegible] White were the only two working in this department during the month of January.

No new construction was in progress and ordinary maintenance of buildings was carried on. With the fifty odd buildings to keep in repair at Yellowstone, they were kept busy with this class of work. This work consisted of repairing doors, windows, laying a new floor in [illegible]'s quarters, putting up shelves, etc.

Master Carpenter Bowman was on sick leave during eight days of January.

Sanitation Department - Maintained and operated the water and sewer systems, refrigerating plants, heating plants, inside plumbing systems, janitor work, hauled garbage, etc. One solution type chlorine machine was operated. An average of nine pounds of chlorine gas was fed into the sewage every twenty-four hours and tests for residual chlorine were made daily.

The new heating plant for the bachelor building, which heats three buildings, was put in operation January 15 and is fired with oil. Oil piping was completed and steam turned on, the work being ninety-eight per cent complete except for the steam mains in the boiler room which will be covered with asbestoseal covering and painted.

230 New Construction

No force account construction road projects were active during the month.

Contractors on the Golden Gate project continued work on the tunnel section with a small crew, but were forced to close down several times for a day or two because of too severe cold or snow storms.

The new heating plant for the bachelor building, which heats three buildings (one a duplex), and for which funds were alloted in the 1935 fiscal year appropriations, was put in operation on January 15 and is working very satisfactorily. This plant is fired with oil. The work is practically complete except for the steam mains in the boiler room which will be covered with asbestos and painted.

Due to the impounding of ten per cent of these funds, we did not complete all we had originally planned, such as new radiators, etc., but did complete installing the new furnace and installed underground steam mains to the other two buildings.

300 - Activities of Other Agencies in the Park

310 - Public Service Contractors

The general store at Yellowstone was kept open during the entire month to

take care of local residents. The present manager, Mr. [illegible], is rendering unusually fine service and seems extremely anxious to accommodate our people. The store has much more a fine supply of fresh vegetables, the purchase of which is being handled by Mrs. Pryor in California, and this fine service has been much appreciated by the local residents who in the past have been unable to purchase much green stuff in the post during the winter months.

400 - Flora, Fauna and Natural Phenomena

410 - Ranger, Naturalist and Guide Service

The usual patrols were made by the protection department for the conservation and protection of the park wild life during the past month. Several of the rangers were on duty at the Buffalo Ranch assisting in making the buffalo calf roundup.

Chief Ranger Baggley and two of the Assistants, George Miller and Fred Johnston were on duty at Mammoth during the month. Assistant Chief Ranger Lafleur was at the Buffalo Ranch from January 8 to 18, inclusive, and spent the balance of the month at Mammoth on game matters. Park Ranger Harry Trischman went to the Buffalo Ranch on January 24 to assist with the buffalo feeding.

Assistant Chief Miller was engaged on general office matters and Assistant Johnston was engaged on forest and insect problems at Mammoth headquarters.

Chief Ranger Baggley was in Livingston on January 6 on matters pertaining to the northern elk range. Also, in company with Acting Superintendent Edwards and Assistant to the Superintendent Joffe, he was in Helena, Butte and Bozeman at the Montana Sportsman's Association meeting. They left Yellowstone on January 10 and returned January 12.

Beginning on January 17 and returning January 21, the Chief Ranger made an inspection on horseback of the northern section of the park, making visits to Gardiner, Bellrocking, Slough Creek, the Buffalo Ranch and Tower Falls.

420 - Museum Service

Park Naturalist Bauer spent the first two weeks of the month lecturing and interviewing applicants for ranger-naturalist positions. Lectures were given to the Lions' Club at Boulder, Colorado, the Baptist Church, the Boy Scouts, the Geology Club at the University of Colorado and to the Sigma Xi society in Laramie, Wyoming.

Plans for a library room were made by Mr. Edwards and Mr. Bauer. This room is to be in the basement of the Mammoth Lodge, and work will begin at

once. Mr. G. Henry Smith, Library of the University of Colorado, offered to assign classification numbers to all of our Library books if we would supply him with a list, including title, author and volume numbers. The offer was accepted and the list furnished, hence we expect to complete the library cataloging this spring.

The work of accessioning museum items has been carried on during the entire month by Junior Park Naturalist Baggley and for a major part of the month by Assistant Park Naturalist Grove.

On January 20 a meeting of department heads and others approved the formation of the Yellowstone Library and Museum Association and voted to accept the rules and regulations submitted. Officers and directors were elected. The Association is to sponsor the Yellowstone Library and museum and handle the funds obtained from the sale of publications.

Nature Notes were not issued during January, but the January-February issue will be mailed about the middle of February. Following an analysis of replies received from a questionnaire sent to the Nature Notes mailing list and considerable discussion, it was decided to continue Nature Notes as a free publication.

460 - Birds

The usual numbers of ducks and geese were prevalent over the park in all of the open waters and exceptionally large numbers are being reported from the Madison River. However, no actual counts are available. Two swans were seen at Lewis Falls and six on the Snake River near the Snake River Ranger Station on January 28. It was impossible to determine whether or not those were trumpeters.

470 - Animals

During the past month all animals were noted to be in good condition with forage conditions good. All of the game salt grounds in the vicinity of Mammoth, Gardiner and the Game Ranch were replenished this month with 625 pounds of block and crystal salt.

Elk - Three hundred fifty elk were fed daily at both Upper and Lower Slough Creeks. Seven hundred head were at Lower Slough Creek at one time. Several hundred head were counted on Jackards Flat outside of the park at various times during the month. Eight hundred were counted on January 11 along the west side of the Yellowstone River between Gardiner and the Game Ranch. There were 500 head in Mammoth the last of the month. The first elk to visit the Game Ranch this year appeared on January 6 when 90 head were counted. Most of the 800 in that district drifted on down below Tower

Creek via Beattys Gulch and Aldrich Lake. Seven hundred elk are in the near vicinity of Gardiner, Sepulcher Mountain and Mount Everts.

Money has been received for two young elk, one male and one female, which we will try to capture shortly after the first of the month. Other kills consist of two on the Game Ranch and one in Jackson. One calf elk was found with a broken neck on the Game Ranch. It is presumed that this calf fell while attempting to jump the fence. The first elk to shed antlers was noted on the Lower Slough Creek Range January 20.

Bear - No satisfactory counts of these animals were made during the month. However, at the end of the month there were 9[illegible] in the Game Ranch, 32 near Gardiner and 31 in Yellowstone. The balance of the bear herd was fairly well scattered over all of the nearby foothills. [illegible] bear were noted as killed by coyotes in the vicinity of Gardiner and one at Yellowstone. The first observation of shed antlers at the Game Preservation Ranch was on January 24. Last year the first observation of shed deer antlers at the Game Ranch was on January 6.

Moose - Twenty moose were counted in the Thorofare country this month.

Antelope - The antelope are scattered in small bands from Gardiner to Devils Slide, twelve miles from Gardiner. One hundred thirty-one head were counted between Reese Creek and Beattys Gulch, 41 at Devils Slide and 24 on the Reese Creek Ridge. No good counts of antelope were made.

Night hunters are again busy in the Game Ranch district. During the night of January 9, seven antelope were killed, four across the road from the Game Ranch gate, two near Albert Hoppe's house and one on Shadbourne Hill. On January 21 two more were killed at Devils Slide. On undetermined days two more were killed, one at Electric and one near the Gardiner depot, thus making a total of twelve antelope killed by the night hunters to date. Intensive patrols will be made during the next full moon in an attempt to catch some of these hunters. Members of the National Park Service, Forest Service and Montana State Game Department made drives in order to bring the antelope back toward the park on January 26 and 31, the latter drive being the more successful as 35 head were driven back to Reese Creek within the new addition to the park.

Sheep - No reports are available on sheep in the Gardiner Canyon during the month. On January 16, 44 sheep were counted at the mouth of Bear Creek and on Mount Everts. Nineteen head of sheep in good condition are wintering in the vicinity of Tower Falls. One large ram was found on the Yellowstone River, his entire carcass having been eaten by the coyotes with the exception of his large skull and horns. This ram's head is now in Yellowstone.

Buffalo - The buffalo calf roundup was held the first part of the month. A complete report covering the buffalo slaughter and roundup was submitted earlier in the month. Counts of buffalo taken during January are as follows:

Buffalo Ranch	7[illegible] head, including 1[illegible] calves
Upper Pelican Creek	17[illegible] head
Upper Miller Creek	35 head
Cache Creek	1[illegible] head

For the first time in several years a large bull buffalo was being photographed on the Mammoth parade grounds. This animal had been for been wintering between the lodge and the Gardiner River, but on January 27 made his appearance in Mammoth.

Small Animals - The trappers outside of the park in the Thorofare Region to date have taken 30 marten, 8 foxes and 18 coyotes. There follows a report as submitted by Park Ranger [illegible]. [illegible] Lyman, who is stationed at the Sylvan Pass Ranger Station, in regard to the trappers along the east side of the park.

"During December a five day patrol was made from the station to the trap lines of Earl Wagner and Joy Gibson. This is a three year permit, the other permit being held by [illegible] Hillinson, owner of Yellowstone. The tents have been supplied by Yellowstone. Wagner is the winter keeper and Glasgow a guide during the summer. Glasgow receives one-half of the catch and the others a quarter. Present catch consists of six coyotes, 30 martens, one badger and one cross fox.

"The trappers do not infringe on the park. They have a fine country to trap, and there are plenty of fur-bearing animals in its watersheds.

"There are about one hundred and fifty elk in the two watersheds Jones and Crow Creeks. About ten moose were seen in the two watersheds. The elk and moose have been wintering on Jones and Crow Creeks for years."

Buffalo and Other Ranch Activities - At the Buffalo and Slough Creek ranches the main activity for the month was the feeding of the herd. Approximately 30 tons of hay were fed at both Upper and Lower Slough Creeks where approximately 300 elk were fed daily at each place. Feeding was started at the Lower Slough Creek Ranch on January 12 and at the Upper ranch on January 14. Ninety-four hundred pounds of cottonseed cake and 50 tons of hay were fed to the buffalo at the Buffalo Ranch.

400 - Natural Features

Green Spring - Shows a stronger flow of water covering the entire northeast slope below the spring. Sulphur bacteria are abundant over fully one-half of this area. The smaller opening at the source is now closed, and the larger terrace on the east is filled with hot water, but is not overflowing.

Palette Spring - The flow is the same and the mound where the spring is increasing in height and extent. Two small basins on the west have been reclaimed and are building up. Three large terraces are forming on the east portion of the slope and a large one about the center. White travertine is in evidence on the fronts of these new terraces without algae. A great deal of sulphur bacteria is in evidence.

Mound and Minerva are the same.

Cleopatra has decreased.

Main is overflowing slightly along its north slope.

Jupiter and Blue Springs - are putting out about the same amount of water as in December. There are not many algae in evidence and the colors are dark and dingy.

Angel Terrace - shows no change from last month.

Twin Geysers - On January 17, 1950, Rangers Ing and Elliott observed an eruption of twin geysers at Fort Hill. They were attracted by the noise and rushed out in time to see both geysers erupting to a height of at least 60 feet. The eruption, a violent one in which mud, stones and large sticks were thrown out, lasted only about four minutes.

Emerald Spring - On January 31, 1950, Chief Ranger Hagley observed Emerald Spring. The spring was full and overflowing, but a large steam vent has opened about two feet from the spring and is roaring in competition with the once famous Black Growler.

500 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

Travel for the month consisted of 110 visitors travelling in 32 automobiles. All travel entered and left the park via the northern entrance.

530 - Special Visitors

Kenneth [illegible] Carter, former ranger-naturalist, who arrived in the park on December 19 for the purpose of collecting parasites, departed on January 2.

L. [illegible] Orr and James [illegible] Carter of the Fish Investment Company, who arrived in the park on December 18 to take movies in behalf of various park activities, returned from Old Faithful on the 16th of January and departed the following day for their headquarters in Denver.

Mr. G. H. Carpenter, dentist of Casper, Wyoming, came in Cardine on January 20 to take movies on a park ski trip.

600 - Protection

610 - Police Protection

Peter Cichelotto, a Government truck driver, confessed the stealing of gasoline from the Government truck which he was driving while hauling freight in the town of Gardiner. He was taken before Judge Lemefee in Gardiner on January 14 where he was fined $30.00. He was discharged from the Government service.

There is quoted below a short report as submitted by Park Ranger [illegible] Upton of the Sylvan Pass Ranger Station, which is of interest in the line of police protection in Yellowstone.

"Forest Ranger Spencer, who lives at Cowiti Ranger Station, heard a shot one evening and proceeded to investigate. On the highway near his station he encountered a resident of the lower country by the name of Hardy Shell loading an elk into his automobile. Ranger Spencer said 'Hardy Shell you are under arrest.' Mr. Shell protested to unload the quarters of elk from his car and place them in Spencer's car.

"The next morning Spencer ordered Shell to come to Cody to answer charges of violation. Mr. Shell appeared, and a jury trial was held. Mr. Shell swore he never was there or saw Ranger Spencer. A quick verdict of acquittal was pronounced and Mr. Shell went home."

640 - Destruction of Predatory Animals

Thirty coyotes were killed this month as compared with [illegible] for the same month last year and 24 in 1931. This makes a total of 131 this year, 1[illegible] last year and 73 in 1931 for the same period.

900 - Miscellaneous

Post Office

The volume of business for January in all branches was slightly more than for the corresponding month in 1928.

Church Services

Services were held in the Chapel Sunday evening, January 20, by Rev. L. D. Smith. Music by a choir organized and directed by Mrs. Edwards has served to create a new interest in church services, and the attendance has shown a marked increase.

On Sunday evening, January 30, Rev. Webster L. Blought, the English Lutheran minister from Livingston, Montana, held services in the Lodge room.

Hospital and Medical

Dr. Rudzeff, resident physician, made 111 house calls and had 157 office calls during January.

Deaths

The mother of L. L. Flint, editor of the Livingston (Montana) Enterprise, died in Livingston on January 4 after a prolonged illness. Mrs. Flint was 79 years of age. She was buried in Livingston on January 5, and Messrs. Edwards, Joffe and Handley attended the funeral services in the Methodist Church.

Mrs. Lawrence Kick, an old time resident of Gardiner, died in Livingston hospital on January 8 and was buried the following day in Gardiner. Mr. and Mrs. Joffe and Postmaster Lindsley attended the funeral services in the Gardiner Chapel. Mrs. Kick's husband freighted for many years in the Yellowstone and was well known among the old-timers in the park. He died several years ago.

On January 5 we received word over the radio of the passing on that day of former President Calvin Coolidge. In his memory the flag at headquarters is being flown at half mast for a period of thirty days.

Federal Employees' Union

A meeting of the Yellowstone Park Federal Employees' Union No. 400 was held in the Lodge room of the canteen on January 8 and new officers were elected for the ensuing year. Guy D. Edwards was elected President; Frank

[illegible]. Watson, Vice President; Joseph Joffe, Secretary-Treasurer; and [illegible]. Robinson, Guardian. The new Executive Committee consists of Orin Pollson, Chairman; [illegible] Lathrop, Fred Johnston, Larry Miller and Lawrence Cabin. The Union now has forty-two members, seven new members having been secured since the holding of the meeting on January 8. Regular meetings are to be held the first Sunday in each month except the months of July, August and September. The Executive Committee is to have charge of all social functions to be held at Lakeoth for members of the community.

An old time dance was held in the canteen on the night of January 14 and a winter sports carnival was held in the mess building on the 26th. Practically all members of the community attended these two affairs and everyone enjoyed a pleasant time. Similar functions will be held from time to time during the remainder of the winter.

The men of the community are now engaging in volley ball play in the canteen one evening each week, while the women of the community are participating in a class of calisthenics, one evening each week also.

Meetings of the various department heads were held twice during the month on January 3 and 24, and a number of matters of mutual interest were discussed.

Mr. [illegible]. Mitchell, employed as a cook here, left on January 12 for an extended leave of absence, including both furlough and leave without pay. Mr. Mitchell expects to engage in independent lecture work on the national parks while on this leave and to solicit business for private park-to-park motor trips which he contemplates organizing.

Very truly yours,

Guy C. Edwards
Acting Superintendent.

10-159
(May, 1931)

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Yellowstone National Park for the Month of January, 1932

	This Month		This Month Last Year	
	Appointed	Non-Appointed	Appointed	Non-Appointed
Number of employees beginning of month	70	18	74	5
Number of additions	1	0	0	1
Total	71	18	74	18
Number of separations	1	0	3	1
Number of employees close of month	70	18	71	17
Number of promotions during month	0		2	
Aggregate amount of furlough leave taken	24		24	
Aggregate amount of sick leave taken	24		1	
Aggregate amount of leave without pay	14		6	

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(July, 1929)

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

TRAVEL REPORT

Yellowstone National Park for the month of January, 1930

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year	
					Number	Percent
PRIVATE TRANSPORTATION:						
Cars first entry, ...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Cars reentry, ...		[illegible]		[illegible]	[illegible]	[illegible]
Motorcycles, ...						
Total motor vehicles, ...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Persons entering via motor vehicles, ...	110	[illegible]	150	[illegible]	[illegible]	[illegible]
Persons entering via other private transportation, ...						
Total persons entering via private transportation, . .	110	[illegible]	150	[illegible]	[illegible]	[illegible]
OTHER TRANSPORTATION:						
Persons entering via stages, .						
Persons entering via trains, .						
Persons entering otherwise, . .						
Total other transportation, .						
GRAND TOTAL ALL VISITORS, . . .	110	[illegible]	150	[illegible]	[illegible]	[illegible]

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

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UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

*ELECTRICITY GENERATED, SOLD, USED, ETC.

Yellowstone National Park for the Month of [illegible]

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year Number	Increase for Travel Year Percent
Current generated, ...	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sold to park operators, . . .	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sold to others, ...						
Furnished to other Governmental agencies, ...						
Used by National Park Service, lost in transit, etc., . . .	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total current generated, . .	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Amount receivable from the sale of electricity, ... $ [illegible]

* Indicated by K. W. H.

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DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

Yellowstone National Park for the Month of January, 1933

	This Year	Last Year
Park revenue on hand beginning of month, ...		
Received, ...	$4,066.43	$ 3.40
Total, ...	1,340.95	61,176.05
Remitted, ...	$5,407.38	$61,179.45
On hand close of month, ...	5,407.38	61,157.85
	-0-	$ 21.60

Park revenues received this year to date, ...	
Park revenues received last year to date, ...	$131,607.97
Increase, ...	217,816.40
Per cent of increase, ...	86,208.43
do	39.5785

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

National Park [illegible] for month of

Yellowstone	[illegible]	[illegible]
Park revenue on hand [illegible]		
Received	[illegible]	[illegible]
Total	[illegible]	[illegible]
Remitted	[illegible]	[illegible]
On hand close of month	[illegible]	[illegible]
Park revenues received [illegible]		
Park revenues received [illegible] year to date		[illegible]
Increase		[illegible]
Per cent of increase		[illegible]

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UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Yellowstone National Park for the Month of January, 1[illegible]

Description of Projects	Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion

No construction activities were carried on during January.

SUMMARY OF WEATHER CONDITIONS
at
MAMMOTH HOT SPRINGS YELLOWSTONE NATIONAL PARK
JANUARY, 1933

--

January daily temperatures averaged 19.2 degrees, or 1.6 degrees above normal and 5.5 degrees above those of January, 1932. The difference in the two Januaries was due principally to the lower minimum temperatures last year. The average daily minimum temperature last year in January was 5.4 degrees, with an extreme of 15 degrees below zero on the 31st. This year January's average minimum temperature was 13.8 degrees, and the lowest temperature reached was -7, on the 16th. The month averaged 7.3 degrees daily warmer than the month preceding it, December, 1932, during which the daily minimum temperatures averaged 4.3 degrees, with the temperature falling to zero or lower on 12 days, and with an extreme minimum of -29 on the 11th. During January, 1933, the maximum temperature rose above the freezing point on three days. The highest temperature was 36 degrees on the 9th. The month produced no especially remarkable temperature conditions. A cold wave coming in on the 15th and 16th caused a drop in temperature of 31 degrees in 24 hours, from 24 degrees to 8 a.m. of the 15th to -7 degrees, the minimum for the month, at that hour on the 16th.

There were no really heavy snows during the month, the greatest 24-hour snowfall being 4.2 inches on the 27-28th. There were, however, very frequent light snows. The total snowfall for the month was 23.3 inches, which was nearly six inches more than fell in December, and 3.1inches more than fell last January. Not a single day in January, 1933, failed to have at least a trace of snow. This record is not paralleled in the official weather history of the station. The greatest depth of snow on the ground during the month was 12.2 inches, on the 28th in the morning. At the end of the month the average depth was 9.5 inches. The snows were characteristically light in water content, producing only 1.19 inches of water, which is 0.40 inch less than normal. The month thus continued the long succession of below-normal precipitation months which includes every month in 1932 except June, and every month in 1931 except September.

January was also remarkable for its cloudiness and the resulting low percentage of sunshine. There were 41 hours of sunshine during the month, the lowest on record, only 14 per cent. of the possible duration. There were 27 cloudy days and four partly cloudy days

The month broke still another record,- the total wind movement, which of course includes every hour of the month and determines the average hourly velocity, which was 11.6 miles by the standard 4-cup anemometer, corrected. The month's maximum wind velocity, 35 miles per hour, on the 2nd, is the highest velocity as yet recorded in January, when old values are corrected to harmonize with current records.

W. T. LATHROP, Meteorologist.

No. 1030—Met'l.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

MONTHLY METEOROLOGICAL SUMMARY.

ation, Yellowstone Park, Wyo.; *month,* January, 1933.

Temperature (Degrees Fahrenheit.) Max.	Min.	Mean.	Precipitation. (In inches and hundredths.)	Character of day.	Per cent. of Possible Sunshine
24	13	18	.03	Cloudy	2
29	20	24	.12	Cloudy	0
29	12	20	.10	Cloudy	20
27	15	21	T.	Cloudy	1
29	24	26	.03	Cloudy	0
33	20	26	.10	Pt.Cloudy	57
32	25	28	T.	Cloudy	14
34	24	29	.03	Cloudy	8
36	26	31	T.	Pt.Cloudy	32
27	9	18	.01	Cloudy	14
20	7	14	T.	Cloudy	0
28	19	24	T.	Cloudy	17
31	21	26	T.	Pt.Cloudy	51
30	25	28	.05	Cloudy	0
26	-4	11	.27	Cloudy	0
13	-7	3	.09	Cloudy	14
20	4	12	.08	Cloudy	1
15	12	14	.05	Cloudy	18
24	14	19	T.	Cloudy	8
29	18	24	T.	Cloudy	4
26	19	22	T.	Cloudy	2
22	8	15	T.	Pt.Cloudy	70
24	14	19	T.	Cloudy	0
21	10	16	.01	Cloudy	0
23	9	16	.03	Cloudy	24
15	2	8	.01	Cloudy	17
29	14	22	.06	Cloudy	0
29	12	20	.11	Cloudy	27
19	12	16	.01	Cloudy	2
21	7	14	T.	Cloudy	15
17	55	11	T.	Cloudy	21
25.2	13.2	19.2	1.19 Total.		14

ATMOSPHERIC PRESSURE.
(Reduced to sea level; inches and hundredths.)

Mean 29.984; highest 30.56, date 11 & 13
lowest 29.40, date 18

TEMPERATURE.

Highest 36, date 9; lowest -7, date 16
Greatest daily range 30, date 15
Least daily range 3, date 18

MEAN FOR THIS MONTH IN—

1871	82	93	17	04	19	15	19	26	20
1872	83	94	17	05	20	16	7	27	19
1873	84	95	19	06	22	17	11	28	22
1874	85	96	26	07	15	18	16	29	11
1875	86	97	16	08	20	19	22	30	5
1876	87	19	98	15	09	21	20	23	31	23
1877	88	11	99	20	10	16	21	21	32	14
1878	89	15	00	22	11	21	22	12	33	19
1879	90	10	01	21	12	20	23	21	34	
1880	91	20	02	17	13	14	24	16	35	
1881	92	16	03	23	14	25	25	21	36	

Normal for this month 17.6
Absolute maximum for this month for 47 years 49
Absolute minimum for this month for 47 years -41
Average daily excess (+) or deficiency (−) of this month as compared with the normal +1.6
Accumulated excess (+) or deficiency (−) since January 1 +50
Average daily excess (+) or deficiency (−) since January 1 +1.6

PRECIPITATION.

Total this month 1.19; snowfall 23.3
Greatest precipitation in 24 hours 0.27, date 14-15
Greatest 24-hour snowfall 4.2, date 27-28
Snow on the ground at end of month 9.5

TOTAL PRECIPITATION THIS MONTH IN—

1871	82	93	1.82	04	0.93	15	0.41	26	0.35
1872	83	94	1.82	05	0.25	16	2.60	27	1.10
1873	84	95	4.76	06	1.48	17	0.69	28	0.70
1874	85	96	2.21	07	2.44	18	1.98	29	1.00
1875	86	97	1.12	08	0.85	19	0.88	30	0.88
1876	87	7.70	98	0.31	09	1.61	20	0.28	31	0.11
1877	88	3.93	99	4.21	10	1.90	21	1.49	32	0.83
1878	89	1.05	00	0.90	11	4.56	22	0.74	33	1.19
1879	90	6.10	01	2.26	12	0.89	23	1.49	34	
1880	91	0.48	02	0.96	13	2.60	24	0.80	35	
1881	92	1.40	03	0.60	14	0.97	25	1.32	36	

Normal for this month 1.59
Excess (+) or deficiency (−) of this month as compared with the normal -0.40
Accumulated excess (+) or deficiency (−) since January 1 -0.40

MEAN RELATIVE HUMIDITY (Percentage).

6 a.m., 79.0; local noon 68.3; 6 p.m. 71.7

WIND.

Prevailing direction SW.; total movement 8,610 miles; average hourly velocity 11.6; maximum velocity (for five minutes) 35 miles per hour, from Southwest on 2nd
Maximum wind velocity this month since 1904
(By three-cup anemometer) 35-SW, Jan 2, 1933

WEATHER.

Number of days, clear 0; partly cloudy 4; cloudy 27
on which .01 inch, or more, of precipitation occurred 18

MISCELLANEOUS PHENOMENA (dates of).

Auroras None; halos: solar None, lunar 17
Hail None; sleet None; fog None
Thunderstorms None
*Frost: light ----; heavy ----; killing ----

NOTE.—"T" indicates trace of precipitation.

*autumn frosts are not recorded after the occurrence of "killing," except in Florida and along the immediate coast of the Gulf of Mexico.

Lowest observed relative humidity, 36%, on 6th, at 6 a.m.

W. T. LATHROP,
Meteorologist *Weather Bureau.*

GOVERNMENT PRINTING OFFICE

Form No. 1030—Met'l.

U. S. DEPARTMENT OF AGRICULTURE.

WEATHER BUREAU.

MONTHLY

METEOROLOGICAL SUMMARY.

STATION

MONTH

....., 19

8—1650 U. S. GOVERNMENT PRINTING OFFICE: 1929