

# Yellowstone Interpreters Newsletter



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NUMBER 5

Yellowstone National Park, Wyoming

MARCH 1971

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**SNOW-SNOW-SNOW:** You may recall coming to the park last season to find a late spring and to hear tales of a generally mild winter topped by late, heavy snows.

Well, we can report something different this year. Deep snows and cold temperatures are combining to give Yellowstone a real good taste of winter weather. Only recently have we received any relief in warmer winds and some rain.

Snow measurements on 12 different snow courses are run once each month throughout the winter. February readings have just been collected with some spectacular results. The Lewis Divide currently has 124 inches of snow for the deepest reading of the courses. Other snow depths at points of interest: Thumb 79", Canyon 55", Lake 38" and Norris 40".

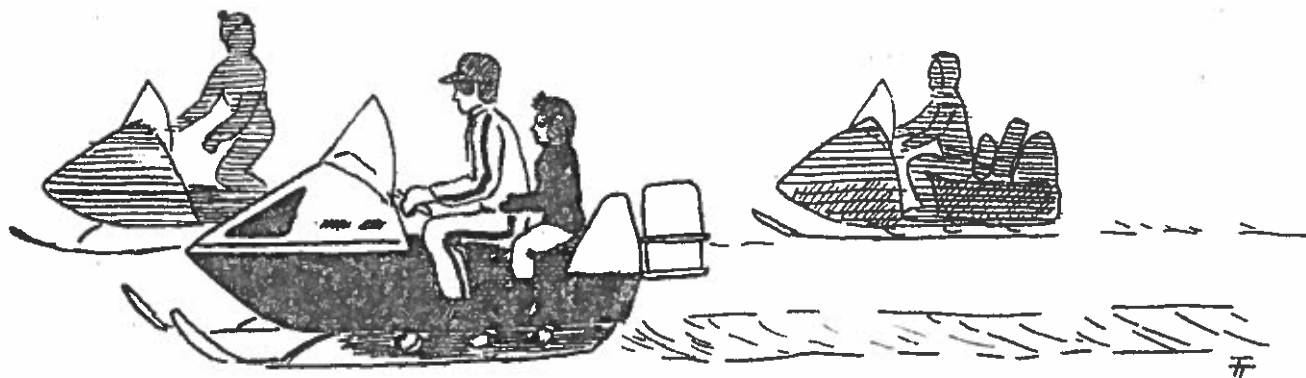
The most vital measurement taken each month is the water content of the snow. February readings this winter were 112-145% of the 15-year average. With at least two more months of winter ahead of us, and more snow in store, records of both snow depth and water content may be set.

"OPEN ALL YEAR" : And that truly can be said now of Old Yellowstone for winter visits are climbing at an unbelievable pace. Better than 16,000 snowmobiling in the park last year (on public roads only, of course) - up 40 percent from the year before, and this year we expect another 40 percent increase in winter use.

So what are we naturalists doing about it? Well, for one thing we've added a new look to Old Faithful - Bob Schultz's - who entered on duty just after the first of the year. He holds down the hot dog stand info station 5 days a week (or at least on the days when lack of emergencies permit). Kathy, of course, is also sharing the delights of wintering in at O.F. We've even purchased a 1-man snowmachine for Bob to commute in from the housing area and for informal roadside contacts in the Upper and Lower Basins.

In case you're wondering what Bob's work weeks are like, here's a sample from his diary:

- Jan 4 - Shovelled snow from roofs all day
- Jan 5 - Shovelled snow from roofs all day
- Jan 10- Snowing
- Jan 11- Snowing
- Jan 12- 11 a.m. to 11 p.m. involved in helping to bring a Thiokol oversnow machine back to Faithful from the Continental Divide nearest West Thumb
- Jan 15- About one foot of new snow in last 24 hours
- Jan 16- More snow
- Jan 17- Shovelled snow from roof of temporary visitor center for the second time. Helped shovel snow from Ranger Station & Trailer
- Jan 21- Snowing
- Jan 23- 275 small machines. Snowing
- Jan 24- 150 small machines
- Jan 27- Naturalist oversnow machine quit at Fountain Paint Pots at 12:30 p.m. Reached quarters finally at 6:30 p.m.
- Jan 28- 7 small machines
- Jan 29- 35 small machines
- Jan 30- At least 400 small machines



ATMOSPHERIC RESEARCH AT NORRIS: Thirty-two scientists, working through the Atmospheric Science Research Center of State University of New York, just completed their twelfth season in Yellowstone. Dr. Vincent J. Schaefer, Coordinator, began this research program in 1959 at Old Faithful. Around the park's thermal features in mid-winter, scientists find the same atmospheric conditions usually existing at 10-15,000 ft. Here basic cloud seeding experiments can be easily and carefully done without the expense of aircraft and flying time.

Yellowstone's exceptionally clean air makes experiments free of pollution factors which often garble results in many cloud-seeding projects.

The sky-rocketing winter use at Old Faithful, especially small snow machines, added sufficient pollution to the local atmosphere to cause problems with some experiments. Seeking a more remote location and cleaner air, the group moved to Norris this year. Dr. Schaefer has commented that Norris suits their purposes very well since the bowl shaped basin holds clouds much longer than the Firehole River Basin.

Teams of 10-12 researchers rotated in and out of Norris at weekly intervals beginning in late January. Each team has had several members from foreign countries. England and Germany have been well represented.

An important part of each team's work is participation in evening seminars. From 7:30 to nearly midnight each evening, one or two team members discuss a particular problem of interest to all. Lively, vociferous discussions usually develop which are acknowledged by all as extremely stimulating.

In behalf of the National Park Service and the Naturalist Division, George Morrison spent some time at Norris. According to him, scientists do eat well - - did you say lobster tail?

WINTER WATERFOWL SURVEY: The annual winter waterfowl survey was taken during the period January 4-8. Various members of the ranger, biologist and naturalist staffs took to skis, snowshoes, snowmobiles and cars to cover a total of 177 miles in making the bird counts. Eight species of waterfowl were identified totaling 1320 birds. Canada geese constituted over one third of the total, with the goldeneye running a close second followed by the mallard and the common merganser. Only 56 trumpeter swan were observed in comparison to 92 counted last year.

A comparison of counts with last year is difficult, as due to a long cold spell this year most of the Yellowstone River between Lake and Canyon was frozen over. The Madison, Firehole and Gibbon Rivers remained free of ice and accounted for the bulk of the birds observed. A total of 11 bald eagles was seen on the survey.

MAN VS. NATURE: This summer saw a steady increase in water flow from Opal Terrace and associated springs. By late summer the water was breaching a previously constructed dike and depositing a fresh coat of travertine behind the YP Company's President's house.

Not many years ago Opal's fluctuating activity had forced the removal of a private tennis court. Now the water seems bent on moving the YP President to a new house. The unrelenting march of Opal has been temporarily sidetracked by a row of sand bags; however, as travertine deposition continues, the sand bags are being entombed. Nature will overcome all.

NEW BOOKLETS ON STREAM: The Yellowstone Library and Museum Association will have on sale next summer two new interpretive booklets. Life in the Geyser Basins by Tom and Louise Brock will be a colorful, popular treatise on the ecology of the thermal basins. The other will be a kids' coloring book titled, Park Ranger! Don't laugh - we see this as an opportunity to reach youngsters (and their parents) with an environmental message, as well as one which will portray the modern park ranger and interpreter as a helpful, friendly and thoroughly professional person. The concept and artwork for the book will be by Keith Hoofnagle.

MISCELLANEOUS:

Item - Carpenters preparing a new larger information desk and display rack for Fishing Bridge Museum to be installed in spring.

Item - Evelyn Wolfe, South District Clerk, has announced her retirement.

Item - New Pay Raise Schedule

<u>Grade</u>	<u>Step 1</u>	<u>Step 2</u>	<u>Step 3</u>
4	\$6,202	\$6,409	\$6,616
5	6,938	7,169	7,400
6	7,727	7,985	8,243
7	8,582	8,868	9,154

"AND WHAT DO YOU DO IN WINTER?" : Well, for one thing you might decide to head for sunnier climes. George Morrison has done just that, having accepted a permanent position as Interpretive Specialist for the northern district in Everglades National Park. The Morrisons left Yellowstone amid falling snow on February 18. Congratulations on your new assignment, George.

Preparing a long-range interpretive plan for Mammoth's Fort Yellowstone has occupied a few of Stan Canter's hours lately. He's also been coordinating our limited-range interpretive radio project; it looks like this will be in full swing by next summer. Stan's article on the radios from a recent NPS Newsletter is enclosed.

We've hardly seen Dick Lake around lately, for he is Yellowstone's candidate for the NPS Mid-Level Management Training Program and has been hither and yon on special assignments. His latest venture has been attending a month-long training course in Missoula for administrators from various land management agencies.

Since last fall Thea Thompson has been filling the Museum Curator position at headquarters in Mammoth. She has spent most of the winter in her office on the second floor of the Museum rummaging through musty boxes of bones, rocks and pickled frogs and muttering to herself about naturalists who never keep good records on the junk they collect!

John Douglass has been helping get the show started at Grant-Kohrs Ranch near Deer Lodge, Montana, a historic area which is proposed for addition to the National Park System. Meanwhile, back at the home ranch, Doug has been a regular visitor to Old Faithful checking the winter operation in preparation for a full-time running of the new visitor center next year, as well as working on plans for a new Braille self-guiding trail which we hope to have going by the Centennial Year.

Flying trips to Washington and other culture centers for Centennial Year planning conferences have been a part of Bill Dunmire's life lately. He's also been editing the Yellowstone Centennial Book, a project that we described in the last Newsletter.

We've all been heavily involved in planning the new roadside exhibits, which are being built at the Harpers Ferry Museum Lab. We hope that ten will be installed by next summer. Four will be placed in the Hayden Valley; the others will be at Obsidian Cliff, Lamar (Fossil Forest), Upper Mammoth Terraces, Gibbon Fall, the North Entrance (wildlife winter range) and Tower Fall.

**FAMILIAR FACES:** With all reports in it appears as though we will have a record number of our seasonal staff returning this coming summer. So far we have received negative replies from only 6 out of our last year's staff of 50+. If this trend holds, the difficulties involved in getting the program rolling in early June should be much easier than last year. Currently we plan to add an additional interpreter to the staff at Old Faithful, Canyon and Mammoth. Barring last minute changes, when the park opens on May 1, early season visitors will be greeted by the smiling faces of Keith Hoofnagle, Kathy Schultz, Gary Vequist, Curt Topham and John Whitman.

A PARTING THOUGHT: by Freeman Tilden

"Throughout the years I have noticed a consistent improvement in the quality of interpretation throughout the National Park System. However, last year, I began to realize that we were not doing enough . . . how many of the visitors were we really reaching? We are entering into a world of crisis, without question. Something needed to be added. The interpreter should have a wider knowledge of what is going on in the world - - else, how can he deal with people who are perplexed?"

"These visitors wonder what their place is in the world. Why am I here, who am I? What is my just relationship with nature? But above all, what is the part that I am going to be asked to play in a rapidly changing world, a world that is being changed in my lifetime? The National Park Service can play an important part in helping people to understand their role. Then, if and when they should return to the land, it will not be as a stranger."



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# New Medium for Our Message

By Stanley G. Canter

Assistant Chief Park Naturalist  
Yellowstone National Park

Yellowstone has come up with a new method of interpretation which is sure to pep up any program suffering from "lired blood." "It's the single tool that will change our approach more than anything we've ever had," says Chief Interpretive Planner Marc Sagan.

Our tool is a miniature limited-range AM radio transmitter. Located along park roads and in parking areas, transmitters broadcast information and interpretation which visitors receive via their own car radios.

A recent study in Yellowstone showed that only about four percent of the visitors passing a roadside exhibit stop to read it. But between 50 and 70 percent of the vehicles passing the radio transmitters tuned in last summer.

## Tuning In

We had kicked around the idea of using radio transmissions for several years. Then in 1968 a local electronics firm gave us 6 transmitters built to our specifications. These, coupled to message repeaters, formed the basis for our experiments during the past two years.

Field tests got underway when we installed a string of transmitters along a 5-mile stretch of one-way road. This auto nature trail interpreted features along the road just as leaflets and signs are used along traditional nature trails.

During the 1970 season we tried different applications of the radios. One installation was entirely battery operated and used a small propane generator to charge the batteries during a 12-hour day.

At another station the tape unit was located in an office; the message was fed into a rented telephone line which carried it to a site out in the Park where AC power was not available. Here the message was taken off the telephone line and fed through a small battery operated amplifier and transmitter.

## Experimenting

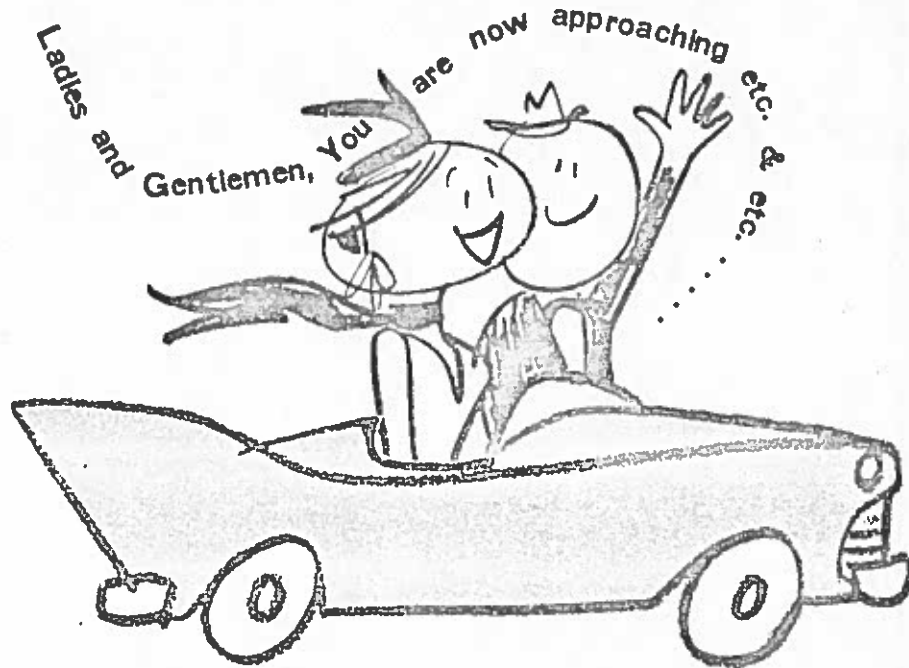
One of the most successful applications of the radios was at an entrance station. By having the tape unit readily accessible, the ranger on duty could change the recorded messages as conditions changed throughout the day. When all campgrounds filled up, the visitor received that information from his car radio as he approached the station.

One transmitter gave information on recommended procedures for camping in bear country. Another, placed in the Old Faithful area, explained the construction projects underway and directed visitors to the parking areas. This message included a warning about hiking in thermal areas. Here it was possible to broadcast to moving traffic throughout the area with one central transmitter.

is that information and interpretation can be provided with practically no intrusion on the scene, and the visitor is not force fed. He can either turn his radio on and listen in, or tune us out and enjoy the park in his own solitude. (Visitors' response to the transmitters was great, with comments such as "Why don't you have more of them in the park?")

We think the ultimate system for Yellowstone will have 50-70 transmitters, ending the need for more signs at each message site. The visitor will be advised to stay tuned to the Park frequency, thereby automatically picking up messages throughout the Park.

After two years of experimenting, and \$6,000 in costs contributed by the Yellowstone Library and Museum Association, we are ready to take the big step and install a perm-



## Looking Ahead

What is the future of this medium of interpretation in the parks? For one thing, it can enormously increase visitor contacts at moderate cost. In some cases a transmitter can do a better job than an existing sign or exhibit, either alone or supplementing the visual interpretation.

One of the beauties of the system

is that information and interpretation can be provided with practically no intrusion on the scene, and the visitor is not force fed. He can either turn his radio on and listen in, or tune us out and enjoy the park in his own solitude. (Visitors' response to the transmitters was great, with comments such as "Why don't you have more of them in the park?")

We suspect this medium is going to revolutionize interpretation in the Service and, within a few years, will be found on State and Federal highways throughout the country.

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

\*\*\*\*\*news release

INFORMATION FOR THE PRESS  
FOR IMMEDIATE RELEASE

January 27, 1971  
Hennesay 344-7381

Once again visitors to Yellowstone National Park set an all time high during 1970, Superintendent Jack K. Anderson announced today. The total of 2,297,290 was a 4.7 per cent increase over 1969, and 3 per cent increase over the previous high of 1968. The South Entrance continues to be the most popular entrance, Anderson said, receiving 31 per cent of the visitors with West Entrance running a close second, receiving 30 per cent. He said one obvious change in travel trends this year was the early morning traffic on the park roads, brought about by campers moving early to find a camp, due to the heavy demand for campsites. During the peak of the travel season, many of the more popular campgrounds were filled as early as 10:00 a.m. Anderson said another interesting change this year was in tent camping which increased for the first time in several years.

Anderson also pointed out a change in the 1971 Entrance and Campground Fees. Campground fees have been established at \$2 for campgrounds without flush toilets or running water, and \$3 for first-class campgrounds with all facilities.

(more)



He said a \$10 Golden Eagle Passport will be available to visitors this year which will permit the holder and all passengers in his vehicle into the park. One major difference in the passport this year, however, is that it will not allow any credit toward a campground fee. Last year, the annual permit was good for one dollar credit toward the campground fee. This is no longer true.

In pointing out some of the accomplishments for the last year, Anderson said, Yellowstone underwent a considerable face lifting especially in the Old Faithful area. A new bypass road around Old Faithful, begun in 1969 to alleviate the traffic congestion in the area, was completed and put into service late last fall. A new visitor center complex consisting of three structures, each housing a theatre with a capacity of one-hundred people was started and is expected to be completed by the fall of 1971. One of these buildings he said will be winterized and in operation by next winter. To further enhance the visitors enjoyment to Old Faithful, construction was also begun on a thousand car parking lot to help relieve the parking problem.

Anderson pointed out that additional progress includes contracts being awarded for construction of a bypass around the Lake Hotel and Lake Lodge complex plus a bypass around West Thumb.

It is recognized Anderson said that with all the construction underway in the park next summer, the visitor is going to encounter some unavoidable delays. We ask the visitors to bear with us for awhile and we will inconvenience them to the absolute minimum.

Anderson said winter travel to Yellowstone continues to grow in popularity as evidenced by the 50 per cent increase in snowmobile travel over last year. There were some 16,483 people who visited the park by snowmobile in 1970 compared to 10,986 the previous year. He said there were an additional 267 hardy souls who entered the park on skis and snowshoes.

The limited range radio transmitters were again used last summer Anderson said, to further enhance the visitors enjoyment to the park by disseminating information to the visitor while he is driving in his automobile. These transmitters have a range of about one-mile or less and are strategically located throughout the park to interpret certain features and give other information about the park. He said a short survey last summer revealed that better than 90 per cent of the people questioned took advantage of the system. Anderson emphasized the system does not interfere with any regular broadcasting stations and is proving to be a very effective service to the visitor.

A major research program has been underway on the Firehole and Madison Rivers the past season to determine the effects of the new fishing regulations initiated last year. Anderson commented that some very interesting information has been developed. He said though the number of fish kept by fisherman decreased because of the size limit, the catch ratio (number of fish caught per hour fished) increased. The catch ratio on the Firehole increased by 45 per cent while the ratio on the Madison increased by 46 per cent. The average fishing time per trip was one hour and twenty-seven minutes on the Madison River and one hour and seven minutes on the Firehole. He said this would indicate that a fish was caught in slightly less than every two hours fished.

Since the goal of the program is to provide the visitor with an enjoyable fishing experience and allow him the joy of catching a fish rather than provide food for the table, Anderson said, the program is considered to be a success.

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