



THE
YELLOWSTONE
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The purpose of this publication is to provide scientific and historical data for the use of Park personnel engaged in interpretive activities.

Issues will appear at random, depending upon availability of suitable material, and employees are urged to contribute articles.

The Park Historian will serve as editor. Contributions or inquiries concerning published material should be addressed to him.

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The following, taken from the first annual report submitted by Superintendent Philetus W. Norris to the Secretary of the Interior, marks the beginning of wildlife management in Yellowstone National Park:

"With the best-informed mountaineers, I deem the game in most of the park, especially along the main routes of travel, as too much decimated to justify extra efforts for its protection west of the Yellowstone Lake, River and Grand Cañon. But the wild eastern portion between them and the impassible snowy crests of the Shoshone Sierra, or Yellowstone range, from the base, say thirty miles, along the East Fork of the Yellowstone south, say fifty miles, to apex of a triangle at the head of the lake, contains fewer prominent wonders and more large valuable game-animals than other portions of the park or of the mountains.

"There two or three spirited, intelligent herdsmen might (in addition to profitably rearing domestic animals) also thoroughly protect and, by capture of the young, gradually domesticate any desired number of [wild animals].

"These, by practical rearing, and by sale of the young to zoologists throughout the world, and by judicious slaughter and sale of their flesh, pelts, and furs, and also of those still wild, might render them permanently attractive and profitable to the park and to the nation in its management. That this is not visionary, but eminently practical, the herds of Major Pease and others, of bison, elk, deer, and woolly sheep, mainly captured in the park and now roaming peacefully with domestic animals without inclosure, fodder or other care the whole year, is proof beyond cavil or doubt.

"By proper laws and leases the rocky islets of Alaska produce a fair and reliable revenue from the skins of the arctic seal, when elsewhere practically extinct; why not thus utilize a waste corner of our--in size, elevation, and wonders unrivalled National Park, by timely protection of our rarest animals, our national bird of valor, and our matchless speckled trout?"

[Report on the Yellowstone National Park, Norris
Michigan, October 20, 1877. p. 843]

A BIOGRAPHICAL SKETCH

Philetus W. Norris was born at Palmyra, New York, on August 17, 1821, of parents who had New England origins. His contact with unspoiled natural wonders began at the age of ten when he began guiding tourists through the forest to the great falls of the Genesee River.

That idyllic boyhood was cut short when the family moved to Michigan to take up newly-opened lands. It was a struggle which broke his father's health and left young Norris to help his mother support a large family of girls. The result was that his formal schooling was neglected, and his education was mainly what the wilderness could supply.

At the age of seventeen, Norris entered the service of the Hudson's Bay Company in Manitoba, and at twenty-one, he was able to purchase land in the northwest corner of Ohio and there found the town of Pioneer. The return from his speculation enabled him to get an education as a surveyor and that occupation kept him in the wilderness until the Civil War.

At the outbreak of that conflict he volunteered for service in a battalion of West Virginia scouts, but had to resign his captaincy after receiving serious wounds battling guerrillas. He then served a term in the Ohio State Senate and tried to get a Federal position as surveyor-general of the newly-created Montana Territory (the job eventually went to Henry D. Washburn). During the period of waiting upon his political fortunes, Norris joined the Sanitary Commission of the Union Army, serving with it through the bloody Spotsylvania Campaign, and at the war's end he undertook the guardianship of the estates of fallen Union and Confederate officers.

Acting for the heirs, Norris purchased swamp lands in Hamtramck Township, north of Detroit, and created there the settlement of Norris, Michigan. The ample means he gained through a flourishing real estate business allowed him to engage in frequent exploring junkets through the West.

Among the adventures related in a series of newspaper articles titled "The Great West, A Journal of Rambles Over Mountain and Plain", is the story of an ill-fated attempt to penetrate the Yellowstone region early in the summer of 1870, and an account of a successful trip through the park in 1875.

His exposition of the short-comings of the park's first superintendency resulted in a shifting of that thankless responsibility to him.

Norris was appointed the second Superintendent of Yellowstone National Park on April 18, 1877, serving until February 2, 1882. He was a sincere and energetic man who accomplished much for the area. He secured the first appropriation from Congress--\$10,000 in 1878, using the funds to build the Norris Road to the geyser basins and in construction of a headquarters building on Capitol Hill. He explored much of the park, and his prolific reporting on it helped to popularize the area. His scientific curiosity was unusual, leading to significant contributions in ethnology, archeology and geology.

Norris was replaced by a far less capable man, and he returned to his home to devote his remaining years to investigation of the prehistoric mounds of the Ohio Valley for the Smithsonian Institution. He died at Rocky Hill, Kentucky, on January 14, 1885--a man whose unselfish devotion to the public interest set an example far beyond the standard of his time. Indeed, if Norris had any flaw in his character, it lay solely in his desire to see his name perpetuated in the area where he had labored mightily. He should be forgiven that, since it was so well earned.

ALH

"When you take stuff from one writer, it's plagiarism; but when you take it from many writers, it's research."

Wilson Mizner

"The best executive is one who has sense enough to pick good men to do the work he wants done, and self-restraint enough to keep from meddling with them while they do it."

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RADIOTRACKING OF GRIZZLY BEARS

by

John M. Good

Drs. Frank and John Craighead of the National Geographic Society and U. S. Fish and Wildlife Service, respectively, have been studying Park grizzlies for several years. Among the more interesting facets of their work has been their work on radiotracking. I asked Frank if he could write a bit for the INTERPRETER, but he is swamped with work. He suggested I write up something on the subject with the understanding he would review my work for accuracy. Following are results of our efforts.

Radiotracking of grizzly bears is beyond experimental stages as work on the method has proceeded to the point where the Craigheads say their system fulfills or exceeds requirements for their ecology studies. Two bears were instrumented in the fall of 1961 and three more during the summer and fall of 1962. This experimental work has been sufficient to work most of the bugs out of the system, and the system is much more complex than I thought.

There are really two systems. One permits voice communication among team members. The other involves the instrumented bear, fixed stations to monitor his wanderings, a mobile unit to obtain a fairly close fix, and portable tracking units. The operational ranges of these various units have been determined by field test to be 8-10 miles to a maximum of 20 under favorable conditions for fixed stations, 6-8 miles to 20 maximum for the mobile unit, and 3-5 miles up to 6 for portable units.

How does it all work? A bear is anesthetized and a special collar placed around his neck. The collar contains a metal loop antenna encased in plastic; a tiny transmitter (1" x 1" x 2", wt. 1.8 oz.) and a battery pack complete the package which the bear wears with no apparent discomfort. The mercury cells of the battery pak last from 60 to 105 days. The bear is released to go about his business which is exactly what John and Frank want to study. The transmitter, designed by Philco Corporation, sends out its beep-beep signal and the scientists follow along behind to see what the bear is doing.

Following the bear may not be too difficult, but finding him can be an appalling problem when we consider the vastness of Yellowstone's wilderness and a grizzly's wandering ways. However, if a fixed station can pick up the bear's signal and the truck mounted mobile unit can catch it too, the cross fix locates the

the bear and allows the observer to move into range with his portable unit. Without radio this would be impossible.

Even the experimental results to date are impressive. One bear was continuously tracked for 36 hours and was re-located, tracked, and observed over a two-week period. Animals were located through the intersection of bearings and tracked from a distance using a combination of receivers with directional antennas.

Anyone who has tried to follow any marked animal by visual means knows what a wealth of possibilities radiotracking introduces. Nor is the technique limited to grizzlies. Any wide ranging animal such as moose, coyote, or elk could be followed with the same techniques. Physiological and environmental data can also be telemetered and recorded. Experiments along these lines are being conducted and equipment perfected.

HOT WATER SPIDERS

by

Bud Lystrup

The statement that there are spiders which can run over the surface of hot springs sounds incredible, yet such spiders do exist. I had heard of these unusual creatures many years ago but it remained for Don Herne, West District Maintenance Supervisor, to firmly establish their presence in the Old Faithful area.

The spiders live in cave-like holes along the algal run-off channels, issuing forth to travel rapidly over the surface of the hot waters. Their summer coloration, overall, is grey, with dull yellow bands on the legs.

Three spiders were captured with the help of Larry and Bill Wanlass and they have been sent off for identification. In the past, the spiders have been mentioned in various reports as, "black in winter," "they feed on insects that live on the algae," "they feed on Diptera which undergo complete metamorphosis even through the winter months," "they are able to run swiftly over the surface of hot springs," and "they can be stored in a refrigerated space, thawed out and become extremely active again."

I am sure very few readers of this article are aware of the presence of these arachnids as a part of the little world of the hot spring. I would like to know of any other instances when they have been observed and positively identified, and particularly if they have been found outside Old Faithful area.

THE FOSSIL FORESTS OF YELLOWSTONE PARK

by

Dr. Erling Dorf

The fossil forests of Yellowstone National Park are in many respects the most remarkable of their kind thus far known in any part of the world. They are unique in the following features: (1) They occur in an area more extensive than any other known fossil forests, covering more than 40 square miles. This area lies in the northeast portion of the Park in the uplands between the Yellowstone and Lamar River valleys, 5 to 8 miles east and southeast of Tower Falls; (2) The great majority of the fossil trees are to be found still standing upright in the exact positions in which they originally grew. Most other so-called "fossil forests" of the world, such as those of Arizona, California, and Egypt are actually drifted logs and stumps, lying scattered at random in the enclosing rocks; (3) The volcanic sediments in the Yellowstone Park fossil forests have yielded, in addition to hundreds of upright petrified trees, many thousand beautifully preserved impressions of the leaves, twigs, needles, and cones of over 100 different kinds of plants. No other fossil forest in the world contains so prolific and so complete a representation of the original vegetation; (4) The fossil forests display not just a single forest, but a vertical succession of 12 or more distinct forests of varying compositions, within a thickness of about 2000 feet of volcanic ash, breccia, and mud flows.

Studies of the numerous plants from these fossil forest show that they originally comprised a great variety of different kinds of vegetation including ferns, horsetail rushes, conifers, and broad-leaved deciduous hardwoods. The forests were characterized by the presence of numerous ancient redwoods, or Sequoia, very similar in all respects to the modern giant redwoods of western California and southwestern Oregon. Other less prominent conifers include 2 species of pines and a Torreya.

In addition to conifers, these ancient forests were dominated by species of the following deciduous trees and shrubs: Sycamores (Platanus), walnuts (Juglans), oaks (Quercus), chestnuts (Castanea), and ancestral beeches (Fagopsis), all of whose modern descendents are of common occurrence in our living warm-temperate forests. Of unusual interest is the common occurrence of ancient relatives of the living katsura tree (Cercidiphyllum), which is no longer native to the North American continent, being restricted to eastern Asia. Of secondary importance in these ancient forests were species of

soapberries (Sapindus), maples (Acer), hickories (Carya), dogwoods (Cornus), bay-berries (Myrica), and bays (Persea).

Comparison of these ancient forests with living forests indicates that the climatic conditions must have been very similar to those now found in Virginia and the Carolinas - a genial warm-temperate climate with abundant rainfall of 40 to 60 inches per year. The Yellowstone region at that time is believed to have been one of low relief, lying less than 2000 feet above sea level, as compared to over 8000 feet at the present time.

Geologically speaking, the fossil forests of Yellowstone Park extend back in time as far as the early part of the Eocene Epoch of the Tertiary Period about 55,000,000 years ago. There is further evidence that these successive ancient forests continued to inhabit this region until at least the early part of the Oligocene Epoch about 35,000,000 years ago.

Superintendent P. W. Norris provides an interesting comment on the size of the Yellowstone grizzly bear. He says: "Specimens often occur of incredible size. At times one is met with which, when erect on its haunches--the customary position when looking for an enemy--will overtop in height a man on horseback. With one blow of its fearful forepaw and claws this animal is able to disembowel and kill any other animal of this region. One which I shot near Beaver Lake in the fall of 1879, after he had killed a valuable horse, was certainly heavier than any one of the more than fifty horses in our band. From his carcass thirty-five gallons of oil were obtained, and his skin, now in Washington, after being trimmed and dressed is still 8 feet 6 inches long (exclusive of the tail) and 6 feet 6 inches wide. Though but a few larger than this have been taken, many but little inferior in size have been killed by different members of our parties."

[Annual Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior for the Year 1880. p. 40.]

THE STORY OF "LADY YELLOWSTONE"

by

Horace M. Albright

[Editorial Note: The recent gift of a Yellowstone bear to the Los Angeles Zoo reminded Mr. Albright of a similar gift to the Denver Zoo during the 1920's, when he was Superintendent of the Park]

After the season a grizzly got in the habit of going into a road camp and, when she could not be made to stay away, I had her trapped and brought to headquarters. The trapped bear was brought in on a truck belonging to one of the concessioners and was deposited temporarily north of the store. Denver wanted a female bear but the one we had captured had its heavy winter coat, and it was difficult to determine its sex.

Chief Ranger Sam Woodring attempted to carefully divide the hair with long sticks, but the bear tore them to splinters, meanwhile growling and crying. A North Dakota farmer's wife came out of the store with her children, and, hearing the cries, came over as Sam changed to a fire hose in his attempt to divide the hair of that very mad bear.

The disturbed lady wanted to know why he was tormenting the animal. When she insisted on an answer, Sam explained he was only trying to determine the sex of the bear, then asked if she could help him! The lady turned and left.

The bear was found to be a female, and we shipped her to Denver where she was the pride and joy of the zoo until one day when she suddenly turned on a keeper, while he was trying to clean her cage, and killed him. Then she had to be killed, or so they thought, and they killed her. I think she was called "Lady Yellowstone."

REVIEW OF CURRENT LITERATURE

American Heritage magazine for August, 1963, has an article of value to everyone interested in pageants and the extravaganza approach to the presentation of history. In "Mammon & Monuments" pp. 38-41, and 110-111, Walter Muir Whitehill comments on recent attempts to popularize history by accenting drama at the expense of truth.

The Yellowstone Reference Library now has a copy of The Bonanza West, by William S. Greever (Norman: University of Oklahoma Press, 1963), 430 pp., illustrated, with index. While not directly concerned with the Yellowstone Park area, the author has done an excellent job of covering the Montana gold rush of one hundred years ago (Chapter 9, "Montana Gold and Silver"; pp. 215-237), and his treatment of "Butte Copper" is spicy reading. Here is the background for an understanding of the Park's mining era--1863-1870.

The National Park Service has brought out a volume titled Soldier and Brave (New York: Harper & Row, Publishers, 1963), 279 pp., illustrated, with index. The book, which is Volume XII of a proposed series, provides a compact narrative of the struggle between the Indian and the whiteman in the trans-Mississippi West and doubles as a guidebook to sites. Unfortunately, the work is not as authoritative as it should be and has to be taken "cum granum salis" at some points.

----- Thoughts from Emerson's Essay on Nature (1844)

"Cities give not the human senses room enough. We go out daily and nightly to feed the eyes on the horizon, and we require so much scope, just as we need water for our bath. There are all degrees of natural influence, from these quarantine powers of nature, up to her dearest and gravest ministrations to the imagination and the soul."

"These enchantments are medicinal, they sober and heal us. These are plain pleasures, kindly and native to us."

"...these are the music and pictures of the ancient religion."

"Nature cannot be surprised in undress. Beauty breaks in everywhere."

"It seems as if the day is not wholly profane, in which we have given heed to some natural object."