

Scientists Fight Over Who's Faithful to Yellowstone

■ **Wildlife:** Biologists charge that their findings have been suppressed. Park Service officials say they tolerate dissent.

By FRANK CLIFFORD
TIMES ENVIRONMENTAL WRITER

YELLOWSTONE NATIONAL PARK—With its boiling mudpots and gaseous eruptions, the volatile landscape of the nation's oldest national park has sparked scientific curiosity for well over a century. And just as the earliest accounts of strange natural phenomena raised eyebrows, some of the more unsettling reports these days are provoking debate and dissension.

Recently, two respected biologists, employed by the National Park Service on separate assignments, charged that their work was suppressed because it cast doubt on the wisdom of longstanding government policies toward

wildlife in and around Yellowstone.

Wildlife expert David Mattson said he was the target of "harassment and intimidation," his notes seized and computer files deleted when he challenged official claims that the grizzly bear population, listed as a threatened species for nearly 20 years, was making a recovery.

Plant ecologist Richard Keigley said he was transferred from his research site and prevented from publishing a paper that questioned the park's 25-year commitment to natural regulation—a theory that holds that Yellowstone is a self-regulating environment where plants and animals regenerate without human intervention. Keig-

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ley believes that the park's northern forests may perish if humans do not step in to reduce an increasingly destructive elk herd.

The work of both men has implications beyond Yellowstone.

When his research was cut short, Mattson was working on a new method of estimating population growth among bears in the wild—a task that has confounded biologists for years. Keigley's work supports the case for ignoring animal rights advocates who decry the killing of wild herbivores in order to save some western forests from being browsed to death.

Park officials acknowledge difficulties with the two scientists, but say the trouble has nothing to do with their research being controversial. They said Keigley was reassigned because he ignored his original research assignment. Mattson, they said, simply had a falling out with his immediate superior.

"It is hard for me to see any of this as some sort of scandalous cover-up, when the Park Service is one of the biggest publishers around of dissenting scientists," said John Varley, the director of Yellowstone's Center for Resources and head of the park's science staff for 10 years.



PAUL DIX / For The Times

Richard Keigley, above, examines cottonwoods damaged by browsing animals. He believes elk, below, are endangering park's forests.

However, the issues raised by Mattson and Keigley give new life to a controversy that has raged for years over the issue of scientific independence. Critics argue that the only science encouraged in the Park Service is science that serves the political agendas of policy-makers.

"The Park Service has hung doggedly to research that tends to support what they are doing," said biologist Frederic Wagner, associate dean of natural resources at Utah State University and the editor of a new study that deals extensively with science at the parks. "People like Keigley and Mattson come along with a different view of things and tend to get in trouble."

Variations on Wagner's argument have been made repeatedly in the past. Reports by the National Academy of Science twice have urged the Park Service to give its scientists more room to conduct independent research. A study by the National Parks and Conservation Assn., a nonprofit group that raises money and promotes legislation on behalf of the parks, made a similar recommendation last year, as did a panel of experts commissioned by the Park Service to critique the job it was doing.



Yellowstone has been a lightning rod for criticism since the early 1970s. Nearly 200 grizzly bears died then after park officials ignored the warnings of biologists John and Frank Craighead and shut down park dumps that bears had been feeding from for years.

After the Craigheads accused the park of underreporting the number of bears that had died, officials refused to renew their permit to do research in Yellowstone.

Public indignation over the loss of the bears helped launch a movement in 1975 to declare the grizzly a "threatened species," providing the animals with new protection under the Endangered Species Act, but not ending the debate over how best to accommodate the large and fearsome predator.

Much of today's discussion revolves around how much room the bears need to re-establish a healthy population. During the past 200 years, the grizzly's numbers have shrunk from about 100,000 to well under 1,000. They are confined mainly to isolated pockets, including Yellowstone and Glacier National Parks and nearby national forests in Montana, Wyoming and Idaho.

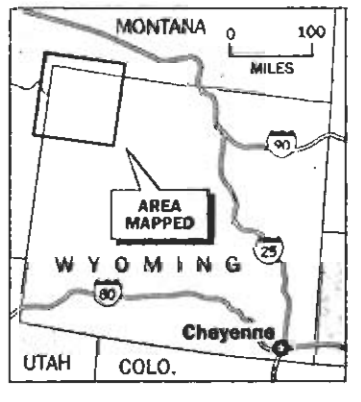
Because a single bear typically ranges over hundreds of miles to meet its seasonal dietary needs, the future survival of park bears depends, in part, on available habitat in adjacent wilderness areas. But with a growing human population along with the demand for wilderness access by miners, ranchers and timber companies, the struggle to preserve grizzly habitat has become highly politicized.

Mattson, 39, who has worked with the Craigheads and is widely regarded as one of the country's most knowledgeable grizzly experts, argues that the bears must have more space to survive. His most controversial contribution to the debate over habitat is a study maintaining that, contrary to official claims, the grizzly population in and around Yellowstone is declining.

His conclusions are based on a method of estimating population growth that divides grizzlies into two groups. He refers to one group as "unhabituated" bears, usually

Yellowstone Controversy

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male, that lay claim to habitat farthest from human contact, and the other group as "habituated," mostly sows and cubs, who are pushed toward the habitat's periphery where encounters with humans are more frequent. The high mortality rate of the "habituated" bears is key to Mattson's theory that the grizzly population is declining.

He was in the midst of refining that study in April when data he was using was confiscated by a senior Yellowstone scientist who was Mattson's boss on a U.S. Interior Department grizzly bear study team. The material had been gathered by Mattson and other team members.

In a series of memos to park officials, Mattson complained that his office had been "raided . . . in a blatant attempt to repress airing of important scientific issues."

His superior, Richard R. Knight, said he was taking back material

that was being misused. "The 'raid on your office' was simply my retrieval of data that I am responsible for before it was used to further criticize the government," Knight wrote in a memo to Mattson.

Interviewed recently, Knight disputed the merits of Mattson's population analysis and said the scientist was working outside his field of expertise. "He's a habitat specialist, not a demographics specialist," Knight said, adding that Mattson had become excessively critical of government grizzly bear policy.

"It's called biting the hand that feeds you."

John Varley, the park's chief scientist, said the conflict had been resolved by meeting Mattson's request for a transfer to the University of Idaho, where he enrolled in a doctoral program in wildlife studies, his tuition paid for by the Park Service.

"Some might argue Mattson's personal situation has been considerably enhanced," Varley said. "He got his material back. He is able to continue his research."

Mattson said he was denied access to the data needed for his paper for several months, until the Sierra Club Legal Defense Fund intervened with a freedom of information request and a threatened lawsuit.

Keigley, a 48-year-old veteran of two decades with the Park Service, was studying the impacts of wildlife browsing on trees when he began wondering about the ability of heavily browsed forests to regenerate. He expressed doubts about natural regulation, the laissez-faire theory of wildlife management that takes man out of the equation.

Keigley believed that Yellowstone's huge elk herd, which has not been culled in 25 years, was laying waste to the park's northern forests. If man did not intervene to reduce the size of the herd, he warned, whole species of trees might disappear from the park.

For 30 years the Park Service controlled the size of the Yellowstone elk herd, until public protest over the killings caused Congress to stop the practice in 1968. Since then, the elk population has nearly tripled, growing from about 8,000 to 22,000.

In his paper challenging natural regulation, Keigley focused on a grove of cottonwoods along the Lamar River in northeastern Yellowstone. He used core samples to show that the only healthy growth cycle coincided with the period

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when the park was curtailing the size of its elk herd.

Park Service officials responded by transferring him from his study site, telling him he was straying from his official assignment and later declining to approve his paper for publication.

Dan Huff, the Park Service's Denver-based western regional chief scientist who reviewed Keigley's paper, said he found it interesting but inconclusive.

"If he'd taken a more humble approach, if he had simply recommended more research into the effects of natural regulation on cottonwood, that would have been fine," Huff said. "But to come in and reject a major theory [natural regulation] on the basis of his dabbling, would be improper, unscientific and immoral."

Keigley also submitted a draft of his paper on cottonwoods to half a dozen outside scientists. Their written reviews were generally favorable.

James Brussard, chairman of the biology department at the University of Nevada, was the least enthusiastic.

"He's a long way from making a rock-solid case, but he has proposed a reasonable way of judging how much damage these browsing animals have done," said Brussard,

who added that he, too, believed that the paper was worth publishing.

Keigley and Mattson are hoping to continue their work on trees and bears under the National Biological Service, a new science program within the Interior Department, which would free them from Park Service supervision.

For the moment, however, they remain on the sidelines of science at Yellowstone.

With his paper on cottonwoods lying in a desk drawer, Keigley does not expect to change the direction of a pending Park Service study that, in draft form, characterized Yellowstone's northern range as an essentially healthy environment.

Meanwhile, bear biologists say that Mattson's unpublished work is not likely to alter the government's case that the grizzly bear is making a comeback and that protected habitat does not have to be substantially expanded.

"When you get right down to it in the scientific world, it doesn't exist if it isn't published," said Charles Jonkel of the University of Montana, who has been studying grizzly bears almost as long as anyone in the field. "People say: 'Show me the data, prove your case.' The only way you do that is to publish in a peer-reviewed journal."