

# Saving the last of the free-roaming buffalo

The Yellowstone bison are in danger because some disease-carrying animals pose a threat to nearby cattle. The dilemma raises fundamental questions.

by Joan Arehart-Treichel

Who knows when the bison (buffalo) first loomed on the North American continent? But by 1700 some 60 million of the beasts were thundering their way across the Western grasslands and wallowing in the bluegrass of the Shenandoah Valley. Then the white man came, tramping buffalo paths westward. By the mid-1800's thousands of buffalo were slain to supply meat for builders of the Union Pacific Railroad. William F. Cody (Buffalo Bill) earned dubious fame for killing 4,280 buffalo in 18 months. By 1889, 60 million free-ranging bison had been snuffed to 800. Two hundred of these survivors were in Yellowstone National Park.

Today, almost a century later, the numbers of free-ranging bison are about the same as in 1889—700 in Yellowstone, 100 in the Henry Mountains of Utah and 100 in Alaska. These numbers imply that animals placed on national and state preserves are safe from extinction. But events of recent months suggest this is not necessarily the case. Free-ranging buffalo in Yellowstone might be eliminated, provided Wyoming, Montana and Idaho ranchers get their way regarding control of a disease that afflicts cattle and buffalo.

For 30 years now these ranchers, state livestock and sanitary boards and the U.S. Department of Agriculture have been investing millions of dollars (presently \$30 million annually) to eradicate a bacterial disease, brucellosis, from livestock. The disease has cost the livestock industry millions of dollars in the past in aborted calves and milk loss. Cattle in Wyoming, Montana and Idaho have now been declared virtually free of the disease. Southern and southwestern states were slower to enter the brucellosis eradication program, but they are catching up with Wyoming, Montana and Idaho. The USDA has set 1975 for complete eradication of brucellosis from American livestock. After that cattle will no longer be vaccinated against the disease. No longer will cattle have to be tested prior to sale.

The problem is that a number of

Yellowstone buffalo are known to harbor *Brucella abortus*, the bacterium that causes brucellosis. The ranchers know it. The Yellowstone biologists know it. The biologists, in fact, see the bacteria as natural buffalo vectors that provide natural checks on buffalo reproduction. The ranchers are afraid that buffalo roaming out of the park onto their ranch lands will infect their cattle. "Once the vaccine is withdrawn," says Dean Prosser, secretary of the Wyoming Stock Growers Association in Cheyenne, "our herds will be susceptible to the disease. There will be no protection."

James Yorgason of the Wyoming Game and Fish Commission disagrees. "There have been no known cases of bison transmitting the disease to cattle in the area." He is joined by Yellowstone research biologist Mary Meagher: "There have never been any documented cases of brucellosis transmission between bison and cattle."

Nonetheless, USDA veterinarian Gerald Fichtner counters, "Ranchers do not have a lot of sympathy for the argument 'we cannot test them.' A lot of them cleaned up their herds without anyone proving dangers of transmission to them."

Last March, Yellowstone biologists, USDA officials, state livestock and game officials, state veterinarians, and cattlemen representatives met at Yellowstone to find a solution to the potential buffalo-cattle threat. Supporters of the ranchers suggested that the Yellowstone bison be trapped and penned and that animals with brucellosis then be killed. The others would then be returned to the park wilderness. This effort, they felt, would clear up the disease in what they saw as "the only known active reservoir of *Brucella* infection in the entire United States in either bovine or buffalo."

The Yellowstone biologists replied that such a measure would wipe out the last free-ranging buffalo in Yellowstone (and the last free-ranging, naturally regulated bison in the United States, since those in Utah and Alaska are managed by hunting). Mary Meagher explained it would be a horrendous job to round up bison from thousands of miles of wilderness. "In fact," she said, "under the most favorable conditions in any area, we would probably be able to trap no more than 75 percent, which would mean killing off those we could not trap." The job could easily take 10 years, she said,



Yellowstone National Park

Once a Wild West hero, the buffalo is now a heavy in the brucellosis drama.

and during that time park visitors would not be able to see buffalo in their natural environment. Natural predators of buffalo carcasses—grizzly, wolves, coyotes, bald eagles, vultures—would be deprived of their natural food sources. This could be especially critical for the grizzly emerging from spring hibernation (SN: 10/9/71, p. 251). The delicate ecological balance of plants buffalo normally feed on, wal-low in and rub against would be upset. And, most tragically, in her view, by the time all the buffalo were rounded up, shot or returned to the wilderness, the small herd of buffalo left would never return to their free-ranging habits. She recalled that similar efforts to eradicate brucellosis from buffalo on the Crow Indian Reservation in southern Montana some years ago resulted in complete destruction of the buffalo herd. "Eradicating brucellosis in Yellowstone buffalo," she concluded, "would boil down to eradicating the buffalo."

Even if it were possible to clean up the buffalo in Yellowstone, she continued, there are other wild animals that harbor the bacteria, although not to the extent buffalo and cattle do. They include elk, rodents, biting flies and ticks. "The USDA has not come to grips with the prevalence of brucellosis in wildlife populations," she challenged.

Yorgason agreed. "Controlling brucellosis in the wild would be virtually impossible. Complete eradication is unrealistic."

Consequently Meagher and other Yellowstone staff proposed a voluntary quarantine program that amounts to killing buffalo that get close to the borders of Yellowstone. They estimate this would be no more than two or three animals a year. But the rancher contingent did not welcome this suggestion. Meagher recalls, "it was like talking to a stone wall, very frustrating." Yet E. A. Schilf, USDA veterinarian, says, "Keeping the buffalo away from the boundaries wouldn't work. We get reports from Montana and Idaho of traveling bison. They are big enough they can do what they want to do. Out in the wilds nobody knows whether they are in the park or out."

Since the March meeting the ranchers have been goading their Congressmen, the USDA and Interior to action. Says a spokesman for Rep. John Melcher (D-Mont.), the only veterinarian in Congress, "We have had indications of concern from ranchers and veterinarians and Melcher thinks the park service should get expert advice from USDA veterinarians about how the disease might be transmitted." Congressmen and their constituents have been writing Yellowstone for more information about the controversy. Of

the moment no action has been taken. "The summer," Meagher says, "has been ominously quiet."

Once elections are over, she predicts, ranchers will rally political support for their program. "They have no idea what hornet's nest they will be stirring if they keep pushing," she warns. Prosser denies political action. "At the March meeting," he said, "it was more or less decided that the resolution of the question was of national significance that would have to be thrashed out between the Secretary of the Interior and the Secretary of Agriculture. We will encourage some resolution."

Yorgason predicts it will come to a political showdown, with the public backing the buffalo instead of the ranchers. "I hope somebody can see a way through this thing," he worries. "Right now there is no pat answer." Admits W. W. Hawkins, a Montana State University veterinarian who was at the March meeting: "I am real curious what is going to happen. I have thought about it a lot and don't see any answers. Frankly I don't think the

ranchers' approach nor the park approach would work. There must be a middle course. But it will take somebody a heck of a lot wiser than me to come up with it."

Hawkins also foresees the issue becoming a political football. He says politics are already sputtering between Interior and Agriculture. There are rumors, he says, that the Secretaries of USDA and Interior will come to some course of action in September.

Assistant Secretary of USDA, Richard Lyng, confirmed this rumor. "We hope to have a plan by then," he told SCIENCE NEWS. "It is important that we somehow get to this pocket of Brucella infection."

Regardless of the plan that emerges, Yellowstone biologists are convinced that the issue is much bigger than a USDA-Interior squabble. "The issue," Meagher declares, "is no less than whether, in the face of population and economic pressures, and increasing demands on natural resources, Americans can continue to maintain wildlife in some designated natural area." □

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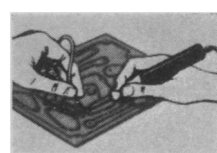
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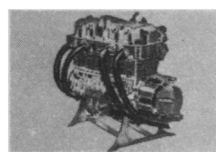
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