

# Buffaloed In Paradise

One would expect the feds at Yellowstone National Park to spare no effort in banishing an exotic disease from its “natural” realm but, instead, the Park Service deliberately and nonsensically quit managing brucellosis—40 years ago.  
By Dave Skinner

Over the red butte on the south fork of Montana’s Bridger Creek, the skies are clear and cool. The hay is cut and baled; the herd in the home pasture looks fat and happy. Jim and Sandy Morgan are saddling up along with three neighbor kids for an easy gather a few miles up from the home place. Sandy’s folks, Bruce and Connie Malcolm, have come over from the Paradise

from ag backgrounds and want to be in agriculture. Jim had a place by Belfry, while Sandy had moved to Bridger after selling some ground in the Tom Miner basin, which branches southwest off the main Paradise Valley of the Yellowstone, south of Livingston. They met in 2001 when Jim’s brother, a custom hayer, told him “some gal was looking to get some hay put up” on her place, “so I went

just started rollin’ when this happened.”

“This” is tomorrow’s loading of all the Morgan herd onto trucks for slaughter—calves, heifers, bulls—the whole lot. They’re being “depopulated” under Animal and Plant Health Inspection Service (APHIS) policy aimed at eradicating brucellosis.

Final victory over brucellosis, after a half-billion dollars of concerted effort by cattle producers and animal-health professionals over a century, is in sight for North America. Only one major reservoir for brucellosis remains in the United States: Yellowstone National Park and its surrounds, the so-called Greater Yellowstone Area—GYA for short.

Brucellosis, or Bang’s disease, aka Malta fever, is an exotic disease to North America, introducing itself to science by sickening soldiers in the Crimean War in the 1850s. It wasn’t until 1887 that Scottish microbiologist David Bruce identified the *Brucella* family of bacteria. Danish veterinarian Bernhard Bang isolated the *Brucella abortus* bacteria as a disease agent in 1897, and Maltese doctor Temi Zammit discovered that unpasteurized or raw milk was a major transmission vector in 1905.

Unfortunately, by that time, steamships and railroads and settlement had spread infected livestock all over the world, including North America. Brucellosis is not only a virulent livestock disease; in humans, brucellosis takes the form of undulant fever, with sweats, muscle and joint pain, meningitis and inflammation of the heart. While not often fatal, it is very debilitating—so much so that the U.S. military successfully weaponized brucella as a biological-warfare agent, thankfully since destroyed.

A test for brucellosis was developed as early as World War I, allowing test and slaughter of infected animals. Nonetheless, by the end of World War II, brucellosis infected 10 percent of all cattle in 30 percent of all herds in the United States.

Strain-19 vaccine was invented in the 1940s, and the fight against brucellosis shifted from detection and control to eradication. From 1957 to 1997, the number of infected herds in America plunged from 124,000 to just 21.

A new laboratory mutation developed in the early 1990s by Gerhardt Schurig of Virginia Tech resulted in the RB-51 vaccine, approved in 1996. Importantly, while only about two-thirds effective, and infectious to humans, RB-51 does not produce the false-positives of Strain 19, nor does it induce abortions in pregnant cows.

Vaccine and test shortcomings aside, the

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After gathering the last of their herd, Jim and Sandy Morgan make sure their son Jake gets in a little saddle time. He’ll be ready when it’s his turn.

country and will watch baby Jake. The gather crew should be back before it gets too hot.

Yesterday, the Morgans agreed on a price. Tomorrow the trucks will come. It’s a great day to be a rancher. The Morgans are the sort of young family that ranching needs. Both are

out there with him.”

Jim and Sandy started dating and got married in October 2005. “We started out working together and ended up working together,” Jim grins. Baby Jake is a bit less than a year old and pretty much fearless. “We had

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*Bison at Yellowstone National Park. Environmentalists will be first to point out that “wild bison” have not been proven to transmit brucellosis to cattle. But in 1990, Texas A&M researchers found that bison in the same place as cattle do infect the cattle, and vice versa. Furthermore, none of the infected herds was pastured particularly close to the park, and none was ever mixed with wild bison.*

100-year-plus war against brucellosis is being won. Canada has declared itself a brucellosis-free nation since 1985, and stopped testing dairy cattle for Bang's in 1999. The United States as a nation is almost free of the disease, especially after a change in policy from individual test-and-slaughter to herd removal. Only Texas has not yet gained class-free status, although its herds have been clean at times. However, Texas may pass review very soon.

Despite infested Yellowstone, all three states surrounding the park (Montana, Idaho and Wyoming) have gained brucellosis-free (class-free) status at least once, with two (Wyoming and then Idaho) recently officially losing and then regaining free status. As of late December 2007, after over 6,235 follow-up tests on over 3,000 cattle came up clean, Montana remains free—for now.

While all the talk is about bison, elk are thought to be the vector of recent infection in all three states. Elk in the GYA mix with both cattle and bison. Montana State University Park County Extension agent Marty Malone

and others feel that “the bison gave it to the elk gave it to the cattle.” It is only recently that DNA tests have been able to determine such things, but preliminary DNA work on the Morgan herd infection points at elk.

As Bruce Malcolm explains: “I have elk in with my cows about 200 days a year. Just the other day, July 5, I had 135 bred heifers in the pivot hay meadows, and 150 elk in the same meadows, more elk than I had cows, which is not uncommon at all. Sometimes they'll bunch up and I get 600 head.”

Alan Redfield, who ranches in Paradise a few miles down from the Malcolms, points out that even if Bruce Malcolm's cows got infected at home in Paradise Valley, “there's elk in Carbon County that get right down among the cows there, too. There's elk and cattle all over Montana, in places you don't think of elk, like around Hinsdale” on the Missouri River flats in northeast Montana where Alan grew up.

Jim Morgan tells a similar tale. While it wasn't too long ago that Bridger-area hunters saw five bull elk and five cow tags a year, Jim

explains: “We've had damage hunts three years running around here. The season runs from August 15 to the end of general season [at Thanksgiving]—a long time.”

Add Jim's story to sportsman-advocate Robert Fanning's take on the matter and a picture sharpens: “Elk have been forced out of their mountain sanctuaries [federal lands] and down on top of livestock production by extreme wolf densities” in the GYA. Bruce Malcolm feels the same way: “When they introduced the wolves in the mid-'90s, well, that just drove the elk out further and faster.”

Were some of these migrant elk infected? That might explain how, on May 1, 2007, 51 Montana cows shipped from Baker to Iowa were tested and one was found positive. It was euthanized May 8, after being traced back to the Morgan ranch in Bridger, 100 miles from the park. The Morgan herd was tested May 16 and six cattle there were found positive. Sandy Morgan and her dad Bruce Malcolm both say they were shocked. They shouldn't have been.

How did Yellowstone National Park (YNP) become a “hot zone” for disease so the



*Elk crossing Madison River at sunrise, Yellowstone National Park. The public controversy about Yellowstone brucellosis centers on bison. But the real jokers in the Yellowstone deck are far-more-mobile elk, which up until now have freely mixed with cattle herds on private lands throughout the West. Right: Like his neighbors, Alan Redfield fully intends to stick it out in Paradise. One reason "is the sense of community and helping each other."*

bison could give it to the elk give it to the cattle? The Montana Farm Bureau Federation (MFBF) has a fascinating 31-page literature review which is posted to its Web site (<http://mfbf.org>). Writer Kara S. Ricketts explains that when the original Yellowstone bison herd fell to 50 animals by 1902, it was decided to supplement the herd with 21 bison from untested Montana and Texas herds in 1907. Furthermore, cattle were brought in as a supplemental milk source for bison calves.

Brucellosis was found in the herd by 1917,

with testing and slaughter of reactors implemented in the 1940s and halted after the winter of 1965-66. The following year, the state veterinarians of Idaho, Wyoming and Montana presciently expressed their concerns about the potential for a growing population of bison to begin leaving the park.

They were ignored. In the early 1970s, the National Park Service (NPS) decided upon a policy of so-called "natural regulation," meaning no active management of wildlife populations. At that point, YNP's bison herd totaled

397. The herd increased and in 1984, with 2,114 bison, 88 were "removed" by state of Montana personnel. There's lots more but, for now, Ricketts notes that a study completed in April 2005 concluded that bison move between winter ranges influenced mainly by "per capita forage availability," or, in plain English, "bison will migrate for food."

With bison numbers through the roof at 4,700 animals, and a seven-year drought, what's next? Richard Kinkie, who ranches on both sides of the Yellowstone at Emigrant, points out: "I notice when I'm in the park the use of the riparian areas in summer. When winter hits, that's where the animals have to be. They don't have any choice." And Alan Redfield, who lives another 10 miles downriver from the Kinkies, recalls: "Last time we had a real winter, in 1998, the park elk came clear down here" to Mill Creek, a solid 40 miles from Gardiner.

Given the national, even global, market for beef, other state veterinarians justifiably fear transport and infection of their states. Jake Cummins, MFBF executive vice president, explains: "Public perceptions are shaped by hysterical media coverage, as in the case of bovine spongiform encephalopathy, or BSE, which in actuality is almost statistically nonexistent. People don't look at the actual risks."

So, to prevent a hype-driven fiasco in their states, some would rather throw the three Yellowstone states under the bus or to



the wolves—your pick—and have already tried. In 1994, the U.S. Animal Health Association (a professional veterinarian's organization), in conjunction with the Western States Livestock Health Association (comprised of 17 western state veterinarians), asked for a downgrade of status for states that allowed exposed wild buffalo to roam.

APHIS threatened to revoke Montana's status without a review, forcing Montana's Gov. Marc Racicot to sue the Park Service and APHIS. That lawsuit led to a settlement preventing a downgrade and set up the framework for the current Interagency Bison Management Plan (IBMP), which guided events during the winter of 1996-97. Bison leaving the park were captured, tested and slaughtered...to nationwide howls of protest "and bucketsful of guts flying about."

APHIS, under pressure from environmental groups seeking to remove Montana's justification for killing wayward bison, then backed off on stripping the state of its free status.

Since that time, the three GYA states have presented a reasonably strong, fairly united front, focusing on NPS's lack of responsible action. Montana's diverse cattle producers have long been especially unified in support of eradicating Yellowstone's disease reservoir.

In 2006, members of the board of the Ranchers-Cattlemen Action Legal Fund (R-CALF), wrote Secretary of Agriculture Mike Johanns, urging USDA to mandate brucellosis testing of bison in the Yellowstone ecosystem; to work toward eradication, including trapping, testing and vaccinating; to control the size of bison and elk herds; to keep on testing for brucellosis where present; continue national monitoring of all cattle; and to, finally, take money from other programs and put it against brucellosis, a position generally congruent with that of both Montana Cattlemen's Association (MCA), Montana Stock Growers Association and MFBF.

However, when the Morgan herd was found infected, some folks wasted no time looking for a bus and something to throw under it: on May 19, Bozeman Chronicle reporter Scott McMillion wrote that Democratic Gov. Brian Schweitzer "has been calling for a new brucellosis plan" including "greater disease-control efforts by the National Park Service and a zone near the park in which all cattle entering or leaving would be tested. The plan also calls for the federal government to compensate ranchers who voluntarily stop grazing in that zone."

In late June, former MCA president and

R-CALF board member Dennis McDonald, who in his spare time chairs the Montana Democratic Party, followed Schweitzer up with an op-ed that called for "a fresh, new, comprehensive approach to preventing infection of our cowherd." In short, a "buffer zone" where, if two herds are found hot, "producers within it would lose class-free status and testing would be required. Cattle outside the zone would not be affected and the state as a whole

and the federal agencies must continue to actively manage YNP bison under the IBMP."

A year later, on July 7, 2007, Cummins received yet another letter from the governor, wanting to "share [McMillion's] enclosed Bozeman Chronicle article" outlining "an opportunity for maintaining the state's brucellosis-free status." This gamesmanship has been recognized for what it is—politics. Richard Kinkie says: "We in essence are being

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*The Morgan ranch looks to be a long way from Yellowstone geysers, lodges, hordes of tourists and park politics, but it isn't far enough. Perhaps no place really is.*

would maintain its brucellosis-free status." After all, "to jeopardize the brucellosis-free status of Montana's 2.5-million cattle so 500 cows can summer in close proximity to the park is not rational from a business standpoint."

But the plan really wasn't a plan, nor was it new. In July 2006, Gov. Schweitzer had written Jake Cummins suggesting MFBF comment on an op-ed by Board of Livestock chairman Bill Hedstrom [appointed by Schweitzer and writing as a "private citizen"] that essentially conceded there is no "realistic eradication plan" for Yellowstone and, further, that "only the federal government could develop and implement such a plan." But rather than crank up the heat, Hedstrom toed a line eerily similar to McDonald's, suggesting placing a "few hundred cattle" in a "special management area" rather than "continue to allow these cattle to jeopardize the status of Montana's remaining two-million head."

Farm Bureau responded shortly after by reiterating that until "eradication plans are developed and fully implemented, Montana

penalized for what the governor says is the good of the rest of the state."

Sandy and Jim Morgan have been raked over but good: "The Board of Livestock was completely silent until it wanted to condemn our herd and called us Monday. No help at all from it," Jim says. "I care about Montana's status and all, but..."

Sandy finishes: "The Board of Livestock didn't jump in until it was too late and then tried to make us look like criminals."

Alan Redfield says: "The buffer zone is strictly a political issue by the governor. It's not going to help the ranchers, especially with international trade issues. It's about making him look good when he's up for reelection. He's trying to divide the ranching community and he's doing a pretty good job."

As of this writing in December 2007, the buffer-zone idea was turned down by the Board of Livestock as the last mandatory tests neared completion. There are many reasons why a buffer zone is unworkable.

First is how the battle against brucellosis has been fought. No brucellosis buffer zones



*Have you ever wondered why elk are so spooky, ready to get the heck out of Dodge at the slightest provocation? Here's your answer.*

have been allowed in the past. Dr. Walter Cook, Wyoming state veterinarian, warned *Prairie Star* reporter Mary Heller: "You're pitting neighbor against neighbor. By segregating a part of the state, you lose the public and political will of the people to get to the heart of the problem."

Second, the buffer would not logically address APHIS's brucellosis policy. "We don't have any cases of brucellosis in Park, Gallatin or Madison counties," Redfield explains, "but that's where they want to put the buffer zone. According to APHIS, travel restrictions only apply in areas where you have a diseased animal. We don't have that."

Third, those potentially affected by the buffer zone surely made a good argument about unintended consequences. The costs of test-in/test-out for Paradise Valley ranchers would "devastate the industry," Marty Malone warns. "The cost of the tests, plus the veterinarian, would put every rancher at a basic competitive disadvantage right there."

With a buffer, "I don't think we can survive here," Richard Kinkie muses. Further, "you don't just pack and leave. Economically, we'd have done it a long time ago. But a lot of things are more important. Lifestyle and the open spaces are important to us. Our history

is here." Finally, Kinkie confesses, "It would be hard to start over, and I don't want to go through that."

Greens and their allied bureaucrats might envision filling Paradise with bison after they've run ranchers off, but they probably wouldn't succeed. Bruce Malcolm is normally a soft-spoken gentleman, but when discussing the end result of a buffer, he gets crusty: "We quit! Sell for houses! We can handle the elements, we can handle the markets, but dealing with government agencies or other social factors, we don't have time to handle that. What's gonna happen is the resources are going to disappear under subdivision. When you have ranch land that can sell for \$20,000 an acre and it takes 50 acres to run a cow, it doesn't take a genius to figure that one out."

What about caring for the land? "My family's done that for a century and nobody's appreciated it," sparks Malcolm. "You can only fight so long and soon you say, the heck with it. I can only stand so much stress in my life and I've got to keep my own balance."

Be careful what you wish for. Kinkie wonders: "Do the environmentalists and governor really want a house every couple of hundred feet?" Malone warns: "If you think ranchers

complain about buffalo getting out, you just wait until a bunch of subdivisions go in and the buffalo stomp gardens. It becomes a public safety issue."

With the federal Animal and Plant Health Inspection Service leading the charge, it has been one for all and all for one, public and private sector, through multiple levels of government through the entire process. No state veterinarian has been able to chuck an isolated county under the bus. North Texas has not been able to sacrifice border counties to a buffer, for example. APHIS has done its part; ranchers have done theirs. Therefore, after a half-billion dollars and a century, *brucella abortus* is about to become a historical footnote. Victory is at hand. Only one thing stands in the way of solving the problem once and for all: the National Park Service.

Combat between warring agencies is nothing new, of course. Yet something rings especially false about NPS's obstinacy: its natural regulation policy implies that native species and their interactions are supreme. *Brucella abortus*, however, is neither native nor natural. It's a virulent infectious organism, native to the Levantine regions of the eastern Mediterranean, where its debilitating effects on both livestock and humans likely had a

major role in establishing Hebrew kosher and Islamic halal rules concerning meat and milk.

One would expect the Park Service to spare no effort in banishing an exotic disease from its natural realm but, instead, the park deliberately and nonsensically quit managing the disease—40 years ago.

Is there a problem? Could the Yellowstone disease reservoir spill back out into the larger landscape? Well, consider that it appears wolves have made elk more mobile in the GYA. Also, elk numbers statewide in Montana away from Yellowstone are well over objective. In addition, elk are a plains animal and are showing up on the plains in greater numbers every year.

Apart from animals Wyoming hunters have been testing, nobody knows if any of these elk are infected. Some must be. The Morgan ranch is a good 100 miles from Yellowstone Park, over two major ridges of tall, rugged mountains. That explains what the Morgans are planning to do once they are back on their feet: “We’re probably going to keep on doing what we’re doing,” Jim muses. “Maybe being more careful with elk, of course.”

Now, does anyone want to place a bet on what might happen if infected cows show up in the Missouri Breaks, or on the southeast end of the Wind Rivers, or north of Idaho Falls? How much more “careful” with elk are producers going to be then? Remember, wolves don’t kill entire herds in one shot.

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*On a warm July evening, the Morgans’ cattle enjoy good grass and water for what will be for them the last time. In two days, there won’t be a single cow in sight.*

Yet Brian Schweitzer, who campaigned as a rancher and sportsman—replete with bolo tie, jeans, pointy boots, big hat and border collie—won’t make a strong statement identifying where the problem is. Until he does, and then acts...well, as Alan Redfield sums up: “Until you make government agencies do their jobs, this problem will

never be solved.” ■

Born in New York, raised in North Dakota and Montana (thanks, Mom and Dad) and currently living in the Aspen North Campus, aka Whitefish, Mont., Dave Skinner prefers motorcycles over horses and beef over any other four-legged protein source.

## Help Out

Jim and Sandy Morgan got a poor price from APHIS for their herd [\$446,000]. State support only paid for the truck fleet that carried the herd away. For 301 head plus calves, including 32 pairs leased from a neighbor, the Morgans got a federal check for, as Jim puts it, “way less than what we should have for 75 years of genetics and three months away from probably our best calf crop that Sandy and I have raised.” Add to that about \$65,000 in related extra expenses. Ouch.

In early October, Jim Melin, another Paradise Valley rancher, called upon other Montana ranchers to help the Morgans rebuild their herd and their future. “The Morgans took a bullet for the beef industry in Montana,” Melin says, “and it’s time that

the beef industry paid them back a little bit.”

A few cattle have dribbled in. Montana Stockgrowers is encouraging members to donate, and a challenge grant has been set up by a local bank. The Morgans are in the phone book, but Jim Melin tells us he volunteered to take calls in order to prescreen “the crazies.” So, if you’re not crazy and you want to help with either money or animals, please give Jim a call at 406-333-4473. ■

## No Excuses

The scientific ground needed to satisfy National Environmental Policy Act requirements, and therefore allow the Park Service to begin an eradication program, has already been covered. The U.S. Geological Survey has conducted tests of Strain 19 and

oral RB-51 on antelope, elk, grizzlies, bison and coyotes, not only for vaccination effectiveness but also for “biosafety” in terms of effects on reproduction—as in: “If coyotes are representative of other canid species, we believe that it is unlikely that either vaccine strain would adversely affect reproduction in wolves.” Oh, what a relief...the bottom line being that RB-51 and Strain 19 inoculation of both bison and elk could be undertaken at minimal biosafety risk to nontarget species such as wolves or bears.

Neither vaccine is perfect in delivery or effectiveness. Nonetheless, as has happened with cattle, systematic inoculation of both bison and elk in conjunction with hunter tests, plus appropriate test-and-slaughter for both species over a period of years, would inevitably vastly reduce and hopefully eliminate infected bison and elk. ■