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Playing with Fire:

CWD Found on Colorado Elk Ranches

by Hal Herring

Originally published in the Jan./Feb. 2002 issue of "Bugle" magazine. All material copyright Hal Herring. Reprinted with permission of the author and the Rocky Mountain Elk Foundation

A new outbreak of chronic wasting disease on Colorado elk farms is considered the "worst ever" in the U.S. What does it mean for wild elk and deer?

Chronic wasting disease, (CWD) has again been found on commercial elk farms, this time in Colorado. Seven different game farms around the state are currently under quarantine, and exposed animals have been shipped to trophy shooting operations and game farms in 15 additional states. Spurred by the new outbreak, which is now considered the worst ever in the United States, the U.S. Department of Agriculture has declared CWD an emergency, freeing \$2.6 million in federal funds to compensate elk farmers whose animals will be killed in an attempt to halt this latest emergence of the disease. Whatever money is left over will go for more sophisticated surveillance and tracking techniques to further monitor the problem. As of mid-October, 1,131 domestic elk and a small herd of domestic whitetails were scheduled to be killed. A special "air curtain" incinerator—which will supposedly raise temperatures high enough to neutralize the infectious CWD agent—has been purchased to dispose of the carcasses.

Colorado has an efficient system for tracking the movement of domestic elk, and it worked as well as it possibly could. Almost all of the infected elk were quickly traced back to the Elk Echo Ranch, a facility located out on the tablelands 70 miles east of Fort Collins. However, by the time the five infected elk were discovered, the Elk Echo had shipped more than 400 head of elk to facilities all over the U.S. According to a story in the Denver Post, Elk Echo owner Craig McConnell had failed to report deaths of elk on the ranch, as required by Colorado regulations, and had dumped at least two elk (which state veterinary officials suspect may have died of CWD) in a gully on the ranch. Officials also say they wish they knew more about 12 animals that McConnell claimed were killed by lightning strikes between 1995 and 1998, according to the same story.

One of the buyers of the Elk Echo animals was Mark Mitchell, at the Trophy Mountain Ranch, a fenced trophy shooting facility located in the middle of wild big game habitat near the Routt National Forest in northwest Colorado. Mitchell purchased 20 "shooter bulls"—domestic elk sold as trophies—from the Elk Echo. Colorado requires that all domestic elk be tested for CWD before the meat is released for human consumption, and one of the shooter bulls killed by a client at the ranch tested positive for the disease. The Trophy Mountain herd was placed under quarantine and, according to a report in the Denver Post, another of the shooter bulls has since proved to be infected.

Mark Mitchell says he believes that the situation is still controllable. "If we didn't have all of our programs in place, this would be a big risk," he said, "but the system is working exactly like it is supposed to." Like many, if not most, Colorado elk farmers,

Mitchell is distrustful of the Colorado Division of Wildlife. "They are playing a two-bladed sword," he said, "because we move animals, they preach against us."

According a follow-up story in the Denver Post, officials from the Division of Wildlife have so far killed more than 50 wild mule deer that were believed to have come into contact with the diseased elk at the Trophy Mountain Ranch.

Other Colorado farms that purchased elk from the Elk Echo and are now under quarantine are the All American Antler Ranch, Country Care and the Rancho Anta Grande, which is located in Del Norte. Before the outbreak came to light, the Rancho Anta Grande shipped animals to farms in Colorado's San Luis Valley and to several other states, including New Mexico and Idaho. State agriculture officials in those states plan to kill and dispose of the animals that can be traced back to the Elk Echo, and the domestic herds that have come into contact with them, as soon as possible according to a report in the Rocky Mountain News.

Another case of CWD appeared on the TNT Elk Ranch near Longmont. Colorado State Veterinarian Dr. Wayne Cunningham said that a wild bull elk that was often seen near the fences of the ranch had been found dead, and tested positive for CWD. "There is definitely CWD in that area," said Cunningham. "You might say that in that area, the disease could move in from the wild." Colorado officials, such as Jim Rubingh, of the Department of Agriculture, say that there probably should be a moratorium on elk farms within the area where CWD exists in the wild. "I think that will have to happen," Rubingh said. "It is just very hard, right now, to imagine a return to business as usual."

Colorado wildlife officials have said for the past decade that there should be no elk farms established in that area, simply because of the potential for spreading a disease that, in the wild, exists in about 15,000 square miles of Colorado, Wyoming and Nebraska, and, on its own, has spread very slowly, or not at all.

"The endemic area has not changed for the past seven years," said Mike Miller, a leading expert on CWD and the head veterinarian for the Division of Wildlife. "It probably is spreading slowly, and we're trying, with some late hunts and herd reductions, to address that. But where the distribution of the disease has really changed is within the elk industry. Right now, the only infected animals we know of on the elk farms can be traced back to other farms. The Elk Echo is in a place where there are no free-ranging elk. We've never confirmed a case of CWD in the wild around there."

Wildlife officials have expressed many concerns about the rise of the elk industry in Colorado, a state with the largest wild elk population in the United States (more than 200,000 animals), and where wildlife is estimated to contribute \$3 billion to the economy. However, their powers are extremely limited, at best. Under pressure from the elk industry, the Colorado legislature stripped all regulatory authority over elk farms from the Division of Wildlife, and placed it in the hands of the Department of Agriculture, which has followed a consistent policy of encouraging the development and expansion of the industry. The Idaho legislature recently took this path as well.

Miller says that they are working very hard to protect free-ranging wild game from infection by domestic herds. "This situation was inevitable," he said, "and the good news is that we caught it early and may be able to contain it before it gets started in wildlife, especially over there on the West Slope. There's no indication that it has spilled

out of any of the infected farms. We're stretched pretty thin right now, but we're determined to keep it that way."

Wildlife officials in Colorado and elsewhere are particularly troubled by the current situation in Saskatchewan. Despite destroying 6,300 domestic elk to control CWD, two wild mule deer were recently confirmed infected with the disease. They were found near the fences of a heavily infected elk farm, in an area where the disease has never been seen before.

Many conservationists worry that this new outbreak on elk farms could derail the many attempts by organizations like the Rocky Mountain Elk Foundation to reintroduce wild elk to their native ranges around the United States, Canada and Mexico. But the reality of the CWD problem is that it exists in one contiguous area of the wild—and among domestic elk—and it has never been found among the wild herds that are the source for the reintroduction efforts.

"I hope our members can recognize that the CWD situation is not some kind of fire drill in the wild," said Alan Christensen, manager of the Elk Foundation's conservation programs. "We've known about the disease for over three decades, we've tested and monitored our source herds, which are all wild, free-ranging animals, and we've never found it."

Christensen said that it is time to make a clear distinction. "This is a problem on game farms, there's no doubt about that. Because the animals are crowded together, in unnatural conditions, for commercial purposes. If there were no game farms, would there be a CWD problem? No. Would the disease be in the news? No. Would there be a USDA emergency? Certainly not. Has it been spreading on its own? Not really."

Researchers have known for almost as long as they have recognized CWD that there are many constraints to the disease in the wild. Because it is a disease of the brain it causes dementia and a severe loss of coordination. "Let's face it," said Dr. Tom Cline, a veterinarian with the South Dakota Animal Husbandry Board, and a veteran of many battles with CWD on game farms in that state, "if a mule deer is staggering around in the wild, a predator will take it down, probably before it has a chance to pass the disease on." Long winters and the simple everyday rigors of life in the wild also limit the potential spread of the disease, say researchers.

The newest outbreak of CWD has cast a vivid light on the elk industry in Colorado, which is second to Minnesota as the largest producer in the United States of elk products—shooter bulls, trophies, elk velvet antler and a fledgling meat market. This could well herald an end to the honeymoon between the Colorado Department of Agriculture and the industry. For wildlife advocates, that is good news. Mike Miller said in a 1999 interview, "I cannot think of a single permit for an elk ranch that has ever been denied because of wildlife concerns."

Miller's colleague in Wyoming, Beth Williams, one of the leading CWD researchers in the world, said recently, "The Colorado Division of Wildlife has done a great job as far as they've been allowed to do it. It's unfortunate that they've had so little power. If you look back at what they tried to do to manage the elk industry you could have avoided a lot of this, but they weren't allowed to put any of that into place." Williams said that placing sole control of the industry under the Colorado Department of Agriculture was a simple failure of common sense. "Wildlife agencies have got to have a

hand in dealing with an industry which can have such an obvious effect on free-ranging wildlife," she said.

John Mumma, who ran the Colorado Division of Wildlife from 1996 through 2000, recently said that the time has long since come to ban elk farming in Colorado. "There's no other way," Mumma said. "The legislature has treated the wildlife resources of our state miserably, and they are completely out of touch with the citizens on that. It's time for the people to rise up and get something going like they did in Montana. If it takes a total buyout, then so be it. Let's just get it done before we lose something that can never be replaced. I'm tired of this shell-game, this constant playing with fire for someone else's financial interest."

Hal Herring is a frequent contributor to Bugle, and last wrote about chronic wasting disease in our January-February 2000 issue.

What is chronic wasting disease?

Chronic wasting disease (CWD) is a member of the family of degenerative brain diseases that includes mad-cow disease, or BSE, which devastated the British beef industry in the early 1990s and continues to cause problems throughout most of Europe. The family also includes a human form of the disease, Creutzfeldt-Jacob Disease (CJD) that causes dementia and rapid death in human beings. Together, the diseases are known as transmissible spongiform encephalopathies, or TSEs, named for the distinctive sponge-like pattern produced by a breakdown in the protein tissues of the brain. They are invariably fatal.

The "transmissible" part of the name is the subject of vast amounts of research, speculation and worry on the part of many people from scientists to hunters. No one really knows how TSEs are transmitted. In Europe, about 100 people have died from a new form of CJD, almost certainly contracted from eating beef products from cattle infected with BSE.

Chronic wasting disease has apparently never

affected human beings, though scientists say there is no way to determine that it cannot. Everyone hopes that CWD will turn out to be like scrapie, a TSE disease that has affected domestic sheep for centuries and has never, as far as we know, killed a human being. It may encourage hunters to know that two of the leading authorities on CWD, Beth Williams and her husband Tom Thorne, have hunted for years in the area where CWD is known to occur in the wild and continue to do so.

Whenever TSE diseases have caused the rates of Creutzfeldt-Jacob Disease in people to rise, or have reached epidemic levels in animals, the events, as far as anyone can tell, have been triggered by humans themselves. The "mad cow" epidemic in Europe was almost certainly caused by rendering sheep and cattle parts into cattle feed, a way to get a lot of cheap protein into cattle and fatten them up for market. The current problem

with CWD in game farm elk is almost certainly a result of infected animals living in close contact, and not being subject to winter-kill or predators.

The Elk Foundation's View

In 1991, the Elk Foundation developed a position statement on elk ranching that reads, in part:

The Elk Foundation believes that raising captive elk, red deer and other cervids on private game farms in states with wild, free-ranging elk populations poses serious risks to the health and viability of those wild elk herds due to the potential of disease transmission and genetic pollution from hybridization with escaped exotic game farm animals. The Elk Foundation supports the continued involvement of state wildlife agencies in the regulation of the game farming industry in matters related to the protection of the health and welfare of wild, free-ranging elk populations.

Through articles in Bugle and sponsorship of symposiums, the Elk Foundation has helped inform people about the dangers of elk farming, and has also contributed to efforts to improve methods to test, detect and better control the spread of diseases.

Saskatchewan's CWD outbreak

The International Fund for Animal Welfare estimates Canada's efforts over the past year to contain chronic wasting disease in Saskatchewan have cost taxpayers about \$60 million, as the federal government rings up bills slaughtering 7,000 domestic elk and livestock, compensating breeders and testing dead animals for CWD. Based on an estimated average pay-out of just over \$2,500 per head for slaughtered elk or cattle, the Fund calculated compensation costs at over \$20 million alone. In addition, the group estimates another \$20 million has been spent on the actual slaughtering, transport of carcasses and other work, and possibly \$25 million more has gone to laboratory testing of thousands of elk and other animals.