

The major paper I've seen on CWD and wolves is Wild, M.A., N.T. Hobbs, M.S. Graham, and M.W. Miller. 2011. "The role of predation in disease control: A comparison of selective and non-selective removal of prion diseases in deer." *Journal of Wildlife Diseases* 47(1):78-93. I'll keep my eyes open for more. Here's a note I wrote in 2014.

## Notes on Wolves, Chronic Wasting Disease, and Brucellosis

We should consider the services wolves provide that can avert epizootics of wildlife diseases. Bruce L. Smith, in his 2012 book, *Where Elk Roam*, warns us of the danger of concentrating elk on feed grounds, because of two serious diseases: brucellosis and chronic wasting disease (CWD). Noting that Wisconsin has spent \$27 million depopulating its whitetail deer to curb CWD (and no CWD has been detected where wolves live), he traces the inexorable march of CWD across Wyoming. "Recent modeling suggests wolf predation may suppress CWD emergence in deer."

Wolves and other large carnivores are essential to the health of the ecosystems on which our game animals and we depend. Wolves have been shown to be capable of reducing or eliminating the spread of brucellosis and chronic wasting disease (Hobbs 2006, Wild et al 2011), in part by reducing density and group sizes of elk and deer. Wild et al concluded, "We suggest that as CWD distribution and wolf range overlap in the future, wolf predation may suppress disease emergence or limit prevalence." Cross et al (2010) wrote, "(T)he data suggest that enhanced elk-to-elk transmission in free-ranging populations may be occurring due to larger winter elk aggregations. Elk populations inside and outside of the GYE that traditionally did not maintain brucellosis may now be at risk due to recent population increases."

We risk losing wolves' essential ecosystem services by continually inventing new ways to reduce their numbers to a socially-acceptable minimum. The goal of wolf management might better be to establish ecologically effective populations of wolves (Lee et al. 2012) wherever the absence of conflicts with livestock make that feasible.

Chronic wasting disease could wipe out our elk and deer. Tom Hobbs writes that increasing mortality rates in diseased populations can retard disease transmission and reduce disease prevalence. Reduced lifespan, in turn, can compress the time interval when animals are infectious, thereby reducing the number of infections produced per infected individual. Results from simulations suggest that predation by wolves has the potential to eliminate CWD from an infected elk population.

Wildlife veterinarian Mark R. Johnson writes that wolves scavenge carrion, such as aborted bison or elk calves. By eating them, they may reduce the spread of Brucellosis to other bison or elk.

Scott Creel and John Winnie, Jr. (2005) report that wolves also cause elk to congregate in smaller groups, potentially slowing the spread of diseases that thrive among dense populations of ungulates.

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On Mar 21, 2016, at 9:51 AM, Delia Malone wrote:

The issue of wolves diminishing/controlling the spread of chronic wasting disease is coming up more and more and could be hugely beneficial to our team – if you happen to have any more info on this I would love to see it! Thanks! D

*Delia G. Malone*

<image001.png>

*"The West of which I speak is another name  
for the Wild. And what I have been preparing to say  
is that in Wildness is the preservation of the world.*

*(Henry David Thoreau)*

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**From:** Norman Bishop [<mailto:nabishop@q.com>]

**Sent:** Monday, March 21, 2016 9:11 AM

**To:** Delia Malone <[deliamalone@earthlink.net](mailto:deliamalone@earthlink.net)>

**Subject:** LTE in response to fears about meeting wolves in the backcountry, and diseases

Many people would pay the price of an airline ticket from either coast to Bozeman to participate in the experiences described in hunter Buck McKay's November 10 or scout dad Steven V. Jenkins' December 4 letter; being near a pack of wild wolves. Economists from the University of Montana, who reported that 325,000 park visitors saw wolves in Yellowstone in 2005, told us that their spending adds to the local economy about \$35.5 million annually.

Yellowstone's wolf population stands at about 100. This year, Yellowstone's visitation has set a new record, above 3.6 million. Backcountry use nights to the end of October (people times no. of nights in sites) are up from 39,226 in 2009 to 44,519 this year. In the front country, Slough Creek, Pebble Creek, and Tower campgrounds are always among the first to fill, partly because people go there on the chance of hearing wolves howl. Do they worry about the wolves? They worry they won't see or hear them.

The danger from wolf tapeworms was explored *ad nauseam* at the May 6, 2010 Montana Environmental Quality Council meeting. A veterinarian from B. C. noted that *Echinococcus granulosus* (*E.g.*) tapeworms occur in deer, elk, and foxes, coyotes, and wolves, but that people who sleep with family dogs were most at risk. A vet from the USGS National Health Center in Madison, WI, reported no known transmission from wolves to humans, but from dogs. A March 30 letter that the deputy director of USFWS wrote to Sen. John Barasso of Wyoming responding to a question about health risks of tape worm in wolves was presented. Key line: "*E.g.* poses a very low health risk to people." Bottom line: Don't eat wolf scats. In 1905, Montana passed a law for the state veterinarian to inoculate wolves with mange. The program was continued for 11 years. Wolves, meanwhile, reduce the spread of brucellosis by eating stillborns, and can stop Chronic Wasting Disease if we let them do their jobs.

(I'm asking the Yellowstone backcountry office to send me an update on backcountry use, so I can pass on those figures to members of the Truth team.)

Norm B.