

**To:** House Agriculture, Chesapeake and Natural Resources Committee

**Subject:** Support for HB 1247 (prohibition on killing contests)

**Date:** January 25, 2022

**Submitted by:** Megan Draheim, Ph.D.

Dear Chair Ware and Committee members,

My name is Megan Draheim and I'm a Professor in Practice at Virginia Tech's Center for Leadership in Global Sustainability. I'm a conservation ecologist, and specialize in human-wildlife conflict and interactions. I have a special interest in predators, and much of my research is specifically about coyote-human conflict.

I'm grateful for your consideration of a bill to ban wildlife killing contests that target coyotes and other furbearers, and wholeheartedly urge you to support it. While I believe there are important ethical issues that arise from these contests, as a scientist I would like to speak to the science. And the science is unequivocal: the mass killing of coyotes, the most common target of these events, does not solve problems for humans. In fact, it can actually increase conflict.

The best available, peer-reviewed scientific literature indicates that wildlife killing contests are not an effective wildlife management tool. I'd like to refute three common myths that contest organizers and participants perpetuate about coyotes to justify continuing these events:

**First, killing contests do not reduce coyote populations.** In fact, science shows that wanton killing of coyotes can actually *increase* their populations. Coyotes are compensatory breeders; killing one can result in several more taking that coyote's place. Coyotes are social animals and often live in packs where only the dominant pair reproduces. The other members of the pack do not mate but are there to help raise the dominant pair's pups. However, indiscriminate killing, such as is the result of wildlife killing contests, breaks up these family units. If one or both of the dominant pair is killed, then the number of potential breeding pairs increases as the surviving alpha and other pack members can start to mate; young coyotes have offspring sooner and litter sizes grow.<sup>1</sup> It is also important to recognize that it is literally impossible to get rid of coyotes. If an area is good coyote habitat (meaning it provides the food, water, and shelter that coyotes need to survive), more coyotes will simply move in and replace any that have died or been killed. Perhaps the best evidence of this comes from the fact that, despite centuries of intense effort to eradicate the species at the federal, state, local, and individual level, coyotes have in fact thrived. While they were once only found in the West, they are now found throughout all of North America and are now moving down through Central America towards South America.<sup>2</sup>

**Second, killing wild animals in contests will not protect livestock.** In fact, studies demonstrate that such indiscriminate killing can lead to *more* livestock loss. Most coyotes do not prey on livestock and instead prefer to eat natural foods, such as rodents, insects, and fruit. But packs whose members are randomly killed have more pups and this can force adult coyotes to move to larger and easier targets like sheep just to feed their families. Killing a coyote in a stable pack also makes room for more troublesome coyotes to move in. Coyotes are territorial and so will keep non-pack members out of an area, but if the pack is disrupted, new coyotes will move in, and some of the newcomers might not be as savvy about living near people without conflict.<sup>3</sup> In fact, this idea has led some researchers to jokingly coin the term "livestock guard coyotes." When the Washington Fish and Wildlife Commission banned killing contests in 2020, Commissioner Molly Linville, a cattle rancher, spoke in support of the rule, explaining that coyotes on her ranch are her "only free employees" and that the animals help protect her crops from gophers and other rodents.<sup>4</sup> Instead of

the mass killing of coyotes, scientists and wildlife management professionals recommend implementing traditional, proven-effective animal husbandry and nonlethal deterrents to prevent conflicts. If preventive measures fail, then lethal control of specific, problem-causing coyotes may be necessary.<sup>5</sup>

**Finally, research also finds that killing contests will not boost numbers of deer, turkey and other game species.** Coyotes do not compete with our hunters for game. The key to healthy game species populations always comes down to good habitat. Studies even show that coyotes can be beneficial to a wide array of game bird species, including ducks and quail, because they suppress populations of smaller carnivores.<sup>6</sup>

The bottom line is that wildlife killing contests are unnecessary and unwise. Although many wildlife killing contests' organizers make claims that their events decrease human-wildlife conflict and increase game species, as you can see from the established literature this is in fact not the case. These contests do not provide good wildlife management, and in fact can increase conflict.

In recognition of science and commonsense, I respectfully urge you to ban wildlife killing contests in the Commonwealth. Please let me know if I can offer you additional research or discussion about human-coyote conflict. As I said above, I do believe that there are important ethical implications in such contests, but have focused here on the science, which alone I think makes a strong case for ending these events. Thank you for your consideration.

Sincerely,

Megan Draheim, Ph.D.  
Center for Leadership in Global Sustainability  
Virginia Tech  
Arlington, VA  
mdraheim@vt.edu

---

<sup>1</sup> See F. F. Knowlton, E. M. Gese, and M. M. Jaeger (1999), "Coyote Depredation Control: An Interface between Biology and Management," *Journal of Range Management* 52(5); R. Crabtree and J. Sheldon (1999), "Coyotes and Canid Coexistence in Yellowstone," in *Carnivores in Ecosystems: The Yellowstone Experience*, ed. T. Clark et al. (New Haven: Yale University Press, 1999); J. M. Goodrich and S. W. Buskirk (1995), "Control of Abundant Native Vertebrates for Conservation of Endangered Species," *Conservation Biology* 9(6); Knowlton, F. F. (1972), "Preliminary interpretations of coyote population mechanics with some management implications." *Journal of Wildlife Management* 36.

<sup>2</sup> See J. W. Hody, and R. Kays (2018), "Mapping expansion of coyotes (*Canis latrans*) across North and Central America," *Zookeys* 759.

<sup>3</sup> See F. F. Knowlton, E. M. Gese, and M. M. Jaeger (1999), "Coyote Depredation Control: An Interface between Biology and Management," *Journal of Range Management*, 52(5); B. R. Mitchell, M. M. Jaeger, and R. H. Barrett (2004), "Coyote Depredation Management: Current Methods and Research Needs," *Wildlife Society Bulletin* 32(4); R. Comeleo, "Using Coyotes to Protect Livestock. Wait. What?," *Oregon Small Farm News*, Oregon State University: OSU Extension Service (June 2018), <https://extension.oregonstate.edu/animals-livestock/sheep-goats/using-coyotes-protect-livestock-wait-what>

<sup>4</sup> See Washington State Fish and Wildlife Commission Meeting, August 1, 2020, <https://www.tvw.org/watch/?eventID=2020081003>

<sup>5</sup> See North Carolina Wildlife Resources Commission, Coyote Management Plan (2018), [www.ncwildlife.org/Portals/0/Learning/documents/Species/Coyote%20Management%20Plan\\_FINAL\\_030118.pdf](http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Coyote%20Management%20Plan_FINAL_030118.pdf)

<sup>6</sup> See C. J. Bishop, G. C. White, D. J. Freddy, B. E. Watkins, and T. R. Stephenson (2009), "Effect of Enhanced Nutrition on Mule Deer Population Rate of Change," *Wildlife Monographs*, 172(1); M. A. Hurley, J. W. Unsworth, P. Zager, M. Hebblewhite, E. O. Garton, D. M. Montgomery, J. R. Skalski, and C. L. Maycock (2011), "Demographic Response of Mule Deer to Experimental Reduction of Coyotes and Mountain Lions in Southeastern Idaho," *Wildlife Monographs*, 178(1); T. D. Forrester and H. U. Wittmer (2013), "A review of the population dynamics of mule deer and black-tailed deer *Odocoileus hemionus* in North America," *Mammal Review* 43(4); K. L. Monteith, V. C. Bleich, T. R. Stephenson, B. M. Pierce, M. M. Conner, J. G. Kie, and R. T. Bowyer (2014), "Life-history characteristics of mule deer: Effects of nutrition in a variable environment," *Wildlife Monographs*, 186(1); E. V. Bragina, R. Kays, A. Hody, C. E. Moorman, C. S. Deparno, and L. S. Mills (2019), "Effects on white-tailed deer following eastern coyote colonization," *Journal of Wildlife Management*, 83(4); North Carolina Wildlife Resources Commission, Coyote Management Plan (2018), [www.ncwildlife.org/Portals/0/Learning/documents/Species/Coyote%20Management%20Plan\\_FINAL\\_030118.pdf](http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Coyote%20Management%20Plan_FINAL_030118.pdf)