

March 30, 2023

RE: LD 814, *An Act to Restrict the Daytime and Nighttime Killing of Coyotes*

Dear Members of the Committee:

Thank you for considering this testimony in favor of LD 814.

The practice of killing coyotes is counterproductive to its stated goals. I will outline in this testimony some significant ways in which the current policy of year-round hunting is deeply misguided.

First, many believe that killing coyotes protects livestock. In fact, scientific research has clearly demonstrated that (1) carnivores including coyotes are responsible for a very small share (less than half a percent) of overall livestock losses¹ and (2) that the indiscriminate killing of coyotes does nothing to reduce overall coyote populations. Mass killings of coyotes began in the United States in 1850, and since then the coyote has tripled its range.² Instead, killing coyotes encourages more breeding and more migration, which fosters even more potentially undesirable interaction between coyotes and livestock.³ Left alone, only the dominant pair in a coyote pack tend to reproduce, suppressing overall population growth. When packs are broken apart through killing, subordinate members find mates and reproduce, and pup survivorship tends to increase.⁴ Thus, hunting coyotes may hurt, rather than help, farmers protect their livestock. Evidence shows that prevention is a far more effective technique.⁵

Second, many hunters complain that coyotes present increased competition for game species such as deer and so should be directly hunted themselves so as to encourage other forms of hunting. There is no scientific evidence that killing coyotes increases the presence of deer. In fact, several comprehensive studies have shown that killing coyotes fails to increase game herds.⁶ Coyotes eat a diverse diet, with rabbits and rodents generally their top choices.⁷ The Pennsylvania Game Commission and the North Carolina Wildlife Resources Commission have both found that coyotes either do not affect, or indeed help (through the control of other predators) the presence of typical game species.⁸

Third, some prominent groups have complained about the detrimental effect of coyotes on ecosystems and biodiversity. In fact, unexploited coyote populations have beneficial effects on biodiversity and the provision of natural ecological services.⁹ Coyotes help control disease transmission among animal populations (especially relevant with the current spread of avian flu), help to manage rodent populations through predation, dispose of other dead animals through opportunistic consumption, remove sick animals from the gene pool, and incidentally protect vulnerable plants from such animals as deer and rabbits. It must also be noted that the coyote is itself native to what is now the U.S. since the Pleistocene era, and so is itself emblematic of our country's vast and precious biodiversity.

In light of the available scientific evidence and my personal hope to help protect Maine's beautiful wildlife, I ask that you support LD 814 and limit the hunting season for coyotes.

With sincerest thanks,
Michael Burrows
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Endnotes

1. See USDA. 2015. "Cattle and Calves Death Loss in the United States Due to Predator and Nonpredator Causes, 2015." USDA-APHIS-VS-CEAH, available at: https://www.aphis.usda.gov/animal_health/nahms/general/downloads/cattle_calves_deathloss_2015.pdf
2. R. Crabtree and J. Sheldon, Coyotes and Canid Coexistence in Yellowstone, in *Carnivores in Ecosystems: The Yellowstone Experience*, ed. T. Clark et al.(New Haven [Conn.]: Yale University Press, 1999).
3. F. F. Knowlton, E. M. Gese, and M. M. Jaeger, Coyote Depredation Control: An Interface between Biology and Management, *Journal of Range Management* 52, no. 5 (1999); Robert Crabtree and Jennifer Sheldon, Coyotes and Canid Coexistence in Yellowstone, in *Carnivores in Ecosystems: The Yellowstone Experience*, ed. T. Clark et al.(New Haven [Conn.]: Yale University Press, 1999); J. M. Goodrich and S. W. Buskirk, Control of Abundant Native Vertebrates for Conservation of Endangered Species, *Conservation Biology* 9, no. 6 (1995).
4. F.F. Knowlton. 1972. Preliminary interpretations of coyote population mechanics with some management
5. A. Treves et al., "Forecasting Environmental Hazards and the Application of Risk Maps to Predator Attacks on Livestock," *BioScience* 61, no. 6 (2011); P.J. Baker et al., "Terrestrial Carnivores and Human Food Production: Impact and Management," *Mammal Review* 38, (2008); A. Treves and K. U. Karanth, "Human-Carnivore Conflict and Perspectives on Carnivore Management Worldwide," *Conservation Biology* 17, no. 6 (2003); J. A. Shivik, A. Treves, and P. Callahan, "Nonlethal Techniques for Managing Predation: Primary and Secondary Repellents," *Conservation Biology* 17, no. 6 (2003); N. J. Lance et al., "Biological, Technical, and Social Aspects of Applying Electrified Fladry for Livestock Protection from Wolves (*Canis Lupus*)," *Wildlife Research* 37, no. 8 (2010); A. Morehouse and M. Boyce, "From Venison to Beef: Seasonal Changes in Wolf Diet Composition in a Livestock Grazing Environment," *Frontiers in Ecology and the Environment* 9, no. 8 (2011).
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7. A. M. Kitchen, E. M. Gese, and E. R. Schauster, Resource Partitioning between Coyotes and Swift Foxes: Space, Time, and Diet, *Canadian Journal of Zoology-Revue Canadienne De Zoologie* 77, no. 10 (1999).
8. B. Frye. (July 25, 2016). "Habitat, not predators, seen as key to wildlife populations," *Trib Live*,
9. 1 S. E. Henke and F. C. Bryant, "Effects of Coyote Removal on the Faunal Community in Western Texas," *Journal of Wildlife Management* 63, no. 4 (1999); K. R. Crooks and M. E. Soule, "Mesopredator Release and Avifaunal Extinctions in a Fragmented System," *Nature* 400, no. 6744 (1999); E. T. Mezquida, S. J. Slater, and C. W. Benkman, "Sage-Grouse and Indirect Interactions: Potential Implications of Coyote Control on Sage-Grouse Populations," *Condor* 108, no. 4 (2006); N. M. Waser et al., "Coyotes, Deer, and Wildflowers: Diverse Evidence Points to a Trophic Cascade," *Naturwissenschaften* 101, no. 5 (2014).