September 9, 2024

To Whom It May Concern,

As experts in biology and ecology, we write to describe scientific conclusions and consensus about issues related to mountain lion management. We hope that sharing our understanding of this science will help Colorado voters make informed choices on Proposition 127, the November 2024 state ballot measure that would prohibit trophy hunting and trapping of mountain lions, bobcats, and lynx.

Mountain lion trophy hunting is unnecessary to manage stable mountain lion populations and serves no management purpose. Colorado Parks and Wildlife considers mountain lion trophy hunting a "recreational opportunity." Several studies have shown mountain lions, and other wild felids like bobcats, are self-regulating[1]. Wild cats evolved in Colorado's natural ecosystems and maintain stable populations based on territorialism, intraspecific aggression, prey availability, low reproductive rates and juvenile survivorship, and other key biological and ecological characteristics[2].

Killing mountain lions and bobcats recreationally decreases diversity in the broader population, while disrupting and destabilizing social structures. This may lead to an increase in the risk of human-mountain lion conflicts[3] and disruptions of wild ungulate populations. Moreover, excessive killing of mountain lions in local areas may impact the larger population, because male lions disperse over long distances to colonize vacant territories[4].

Trophy hunting may also exacerbate human-lion conflicts by removing unoffending animals from the ecosystem, leaving the door open to younger cats who are more likely to be involved in conflict[5]. Rather than killing mountain lions due to conflicts, which can be counterproductive, policy should focus on increasing education and outreach on topics such how to safely house livestock and pets and reduce attractants [6]. Without addressing those well-documented risk factors, communities and livestock owners are likely to see continued conflicts at the same locations[7].

---

1 Cougar Management Guidelines Working Group. Cougar management guidelines. WildFutures; 2005.

2 Laundré JW, Papouchis C. The Elephant in the room: What can we learn from California regarding the use of sport hunting of pumas (Puma concolor) as a management tool? PLoS ONE. 2020;15(2). doi:10.1371/journal.pone.0224638

3 Beausoleil RA, Koehler GM, Maletzke BT, Kertson BN, Wielgus RB. Research to regulation: Cougar social behavior as a guide for management. Wildlife Society Bulletin. 2013;37(3):680–688. doi:10.1002/wsb.299

4 Sweanor LL, Logan KA, Hornocker MG. Cougar Dispersal Patterns, Metapopulation Dynamics, and Conservation. Conservation Biology. 2000;14(3):798–808. doi:10.1046/j.1523-1739.2000.99079.x

5 Teichman KJ, Cristescu B, Darimont CT. Hunting as a management tool? Cougar-human conflict is positively related to trophy hunting. BMC Ecology. 2016;16(1). doi:10.1186/s12898-016-0098-4

6 Washington Department of Fish and Wildlife. Coexisting with cougars in Washington: A guide for small livestock owners. 2022 [accessed 2023 Dec 6]. https://wdfw.wa.gov/sites/default/files/2022-03/Coexisting%20with%20Cougars_FINAL.pdf

7 Peebles KA, Wielgus RB, Maletzke BT, Swanson ME. Effects of remedial sport hunting on cougar complaints and livestock depredations. PLoS ONE. 2013;8(11). doi:10.1371/journal.pone.0079713

If trophy hunting of mountain lions is prohibited, there is no scientific basis to expect an explosion of the mountain lion population in the state of Colorado[8]; in fact, the opposite is most likely. With a prohibition on trophy hunting, mountain lions can provide maximum ecosystem services, like keeping elk and deer herds healthy. Scientific research also shows that mountain lions are allies in the fight against Chronic Wasting Disease which decimating the health of Colorado deer and herds. Peer-reviewed studies show that lions selectively hunt deer and elk with the disease before they show symptoms, and do not catch the highly contagious prion disease themselves or pass it into the environment[9].

Although scientists have extensively researched the interaction between mountain lions and elk and deer populations to test the hypothesis that killing more mountain lions would produce more elk and deer, no study has ever found this to be the case[10]. In fact, an extensive study conducted by Colorado Parks and Wildlife demonstrates that increased killing of mountain lions did not increase deer populations. Other factors such as loss of habitat, disease, wildfire, rainfall levels (especially during the growing season), maternal health, and winter severity are greater predictors of recruitment and survival in ungulate herds[11]. Predator removal actions do not address these environmental factors and thus research has shown that predator-removal actions generally have no long-term impact on ungulate populations[12].

Issues related to large carnivores often inspire an emotional and passionate response from the public, creating a difficult political situation for their governments[13]. This can be exacerbated because some of the science points to counterintuitive conclusions. We urge the voter to navigate this situation with the best-available science as their north star, and to take the lead in educating their communities about the science and the impact of mountain lion management decisions.

---

[8] Logan KA. Puma population limitation and regulation: What matters in puma management? Journal of Wildlife Management. 2019;83(8):1652–1666. doi:10.1002/jwmg.21753

[9] Krumm CE, Conner MM, Hobbs NT, Hunter DO, Miller MW. Mountain lions prey selectively on prion-infected mule deer. Biology Letters. 2010;6(2):209–211. doi:10.1098/rsbl.2009.0742

[10] Forrester TD, Wittmer HU. A review of the population dynamics of mule deer and black-tailed deer O docoileus hemionus in North America. Mammal Review. 2013;43(4):292–308. doi:10.1111/mam.12002

[11] Lennox RJ, Gallagher AJ, Ritchie EG, Cooke SJ. Evaluating the efficacy of predator removal in a conflict-prone world. Biological Conservation. 2018 [accessed 2023 Dec 6];224:277–289. doi:10.1016/J.BIOCON.2018.05.003

[12] Barry JM, Elbroch LM, Aiello-Lammens ME, Sarno RJ, Seelye L, Kusler A, Quigley HB, Grigione. MM. Pumas as ecosystem engineers: ungulate carcasses support beetle assemblages in the Greater Yellowstone Ecosystem. Oecologia. 2019;189(3):577–586. doi:10.1007/s00442-018-4315-z

[13] Darimont CT, Paquet PC, Treves A, Artelle KA, Chapron G. Political populations of large carnivores. Conservation Biology. 2018;32(3):747–749. doi:10.1111/cobi.13065

We hope our insight is helpful to you in making your upcoming decision.

Sincerely,

Jane Goodall, PhD, DBE
UN Messenger of Peace

Robert Wielgus, Ph.D.
Fmr. Dir. Carnivore Conservation Lab
Washington State University

T. Winston Vickers, DVM, MPVM
Wildlife Research Veterinarian
Director, Mountain Lion Project (retired)

Adrian Treves, Ph.D.
Professor and Founder
Carnivore Coexistence Lab
University of Wisconsin-Madison

Marc Bekoff, Ph.D.
Professor Emeritus
Ecology and Evolutionary Biology
University of Colorado Boulder

Francisco J. Santiago-Ávila, MPP/MEM, Ph.D.
Fellow and Clerk of the Board
PAN Works

Mary Foley, Ph.D.
Chief Scientist, Northeast Region
National Park Service (retired)

Fred Koontz, Ph.D.
Wildlife Biologist
Fellow PAN Works

Michelle Lute, Ph. D.
Conservation Scientist
Executive Director
Wildlife For All

Collette Atkins, M.S.
Carnivore Conservation Program Director
Center for Biological Diversity

Elaine Leslie, Ph.D.
Chief of Biological Services
National Park Service (retired)

David Jennings, Ph.D.
Ecologist and Attorney
International Union for Conservation of Nature and Natural Resources' World Commission on Environmental Law

Carter Niemeyer, M.S.
Wildlife Society Certified Biologist
United States Fish & Wildlife Service (retired)

Michael Pardo, Ph.D., Postdoctoral associate
K. Lisa Yang Center for Conservation Bioacoustics,
Cornell Lab of Ornithology

Michael Soukup, Ph.D.
Former Associate Director
Natural Resource Stewardship and Science
National Park Service (retired)

Delia Malone, Ph.D.
Ecologist Colorado Natural Heritage Program
Adjunct faculty Colorado Mountain College

Joshua Rosenau, M.S.
Mammologist
Mountain Lion Foundation

Kent Livezey, M.S.
Wildlife Biologist
US Fish and Wildlife Service (retired)

Erik Molvar, M.S.
Wildlife Biologist
Western Watersheds Project

Rick Hopkins, Ph.D.
Senior Conservation Biologist, Live Oak Associates
Mountain Lion Conservation Biologist and Population Ecologist