Predators and the Science of Wildlife Management

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Some definitions!

Predator:

An organism that consumes other animals, either living or recently killed.

Hunting vs. Control

Predator Hunting

- Recreation and food purposes
- Done by the public
- Often tightly regulated for season, method, bag limit

Predator Control

- Management purposes
- Done by professionals
- Typically no limits on take or method*

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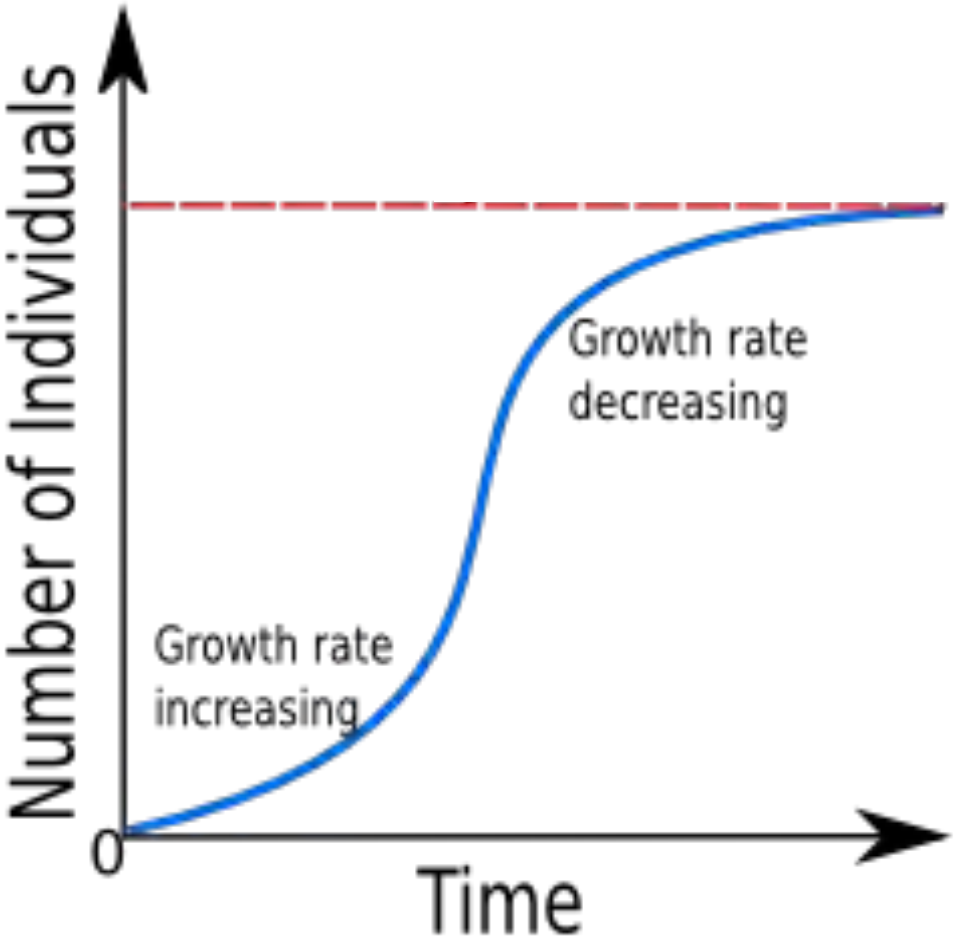
Carrying Capacity

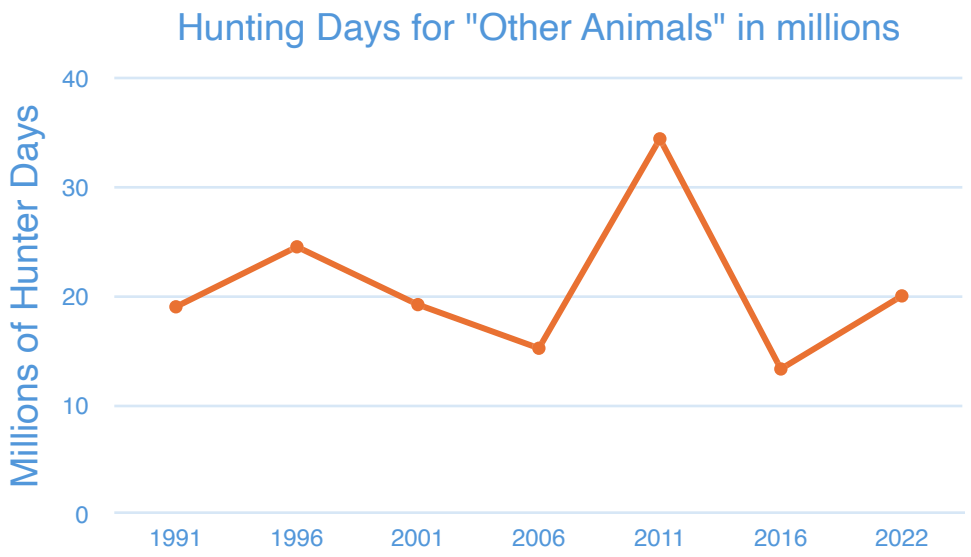


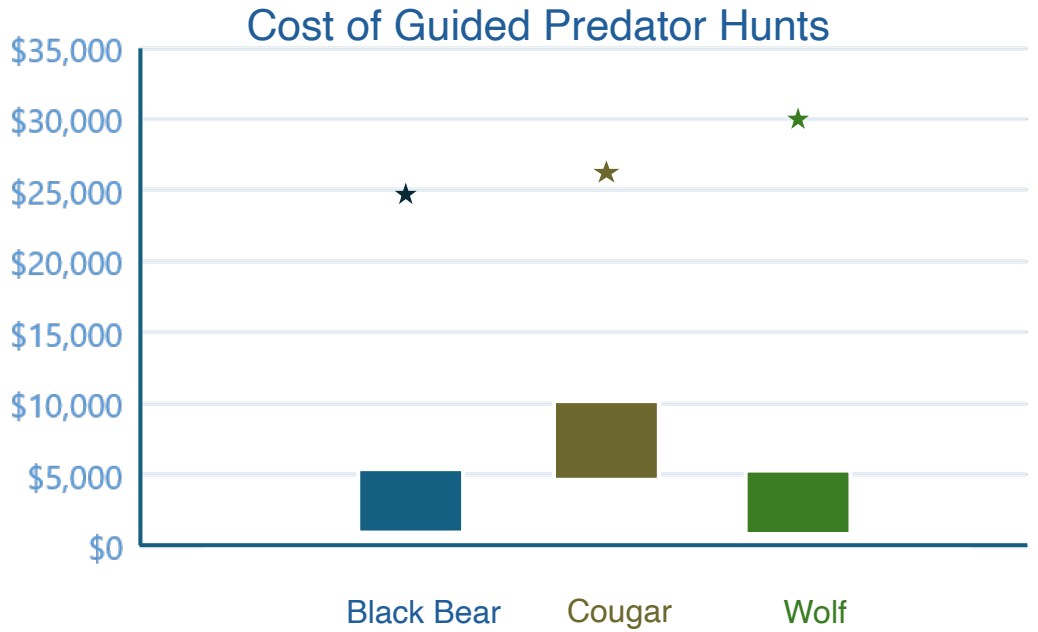
- Ecological Carrying Capacity
- Societal Carrying Capacity

Predator Hunting

The Public Trust Doctrine:

"*The greatest good for the greatest number*"





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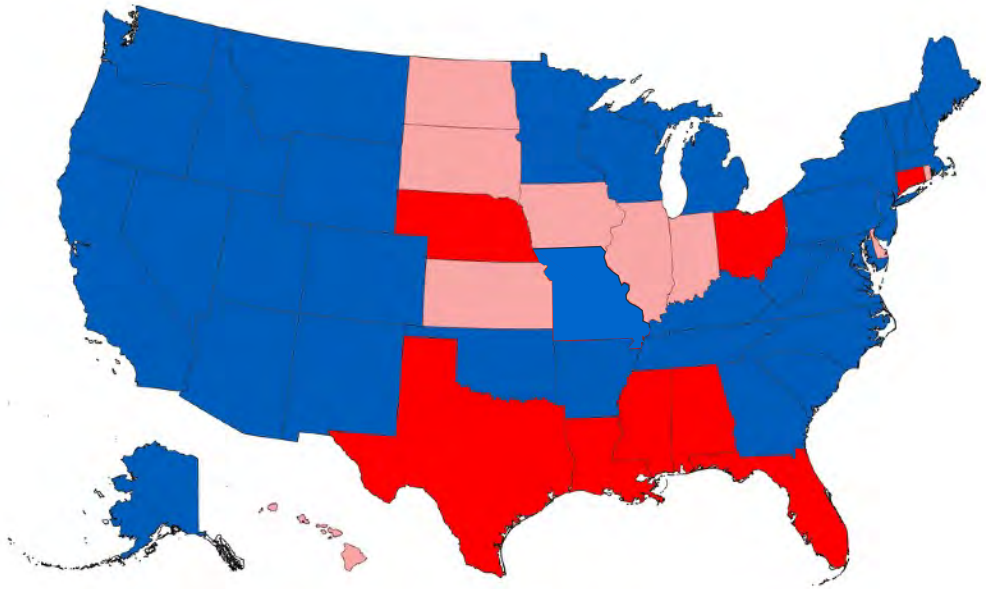
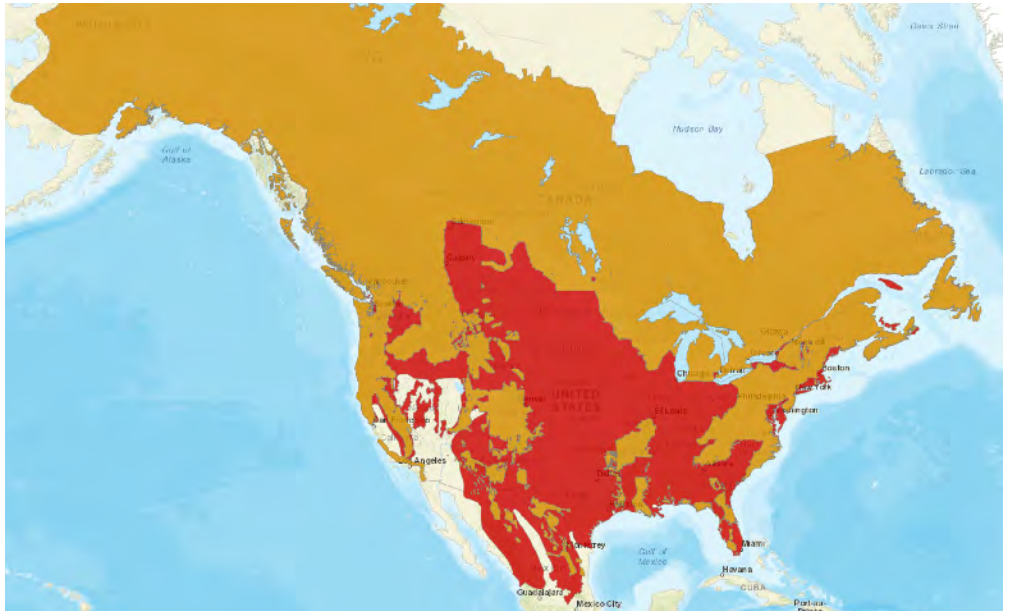
Can we hunt predators sustainably?





2016

1994

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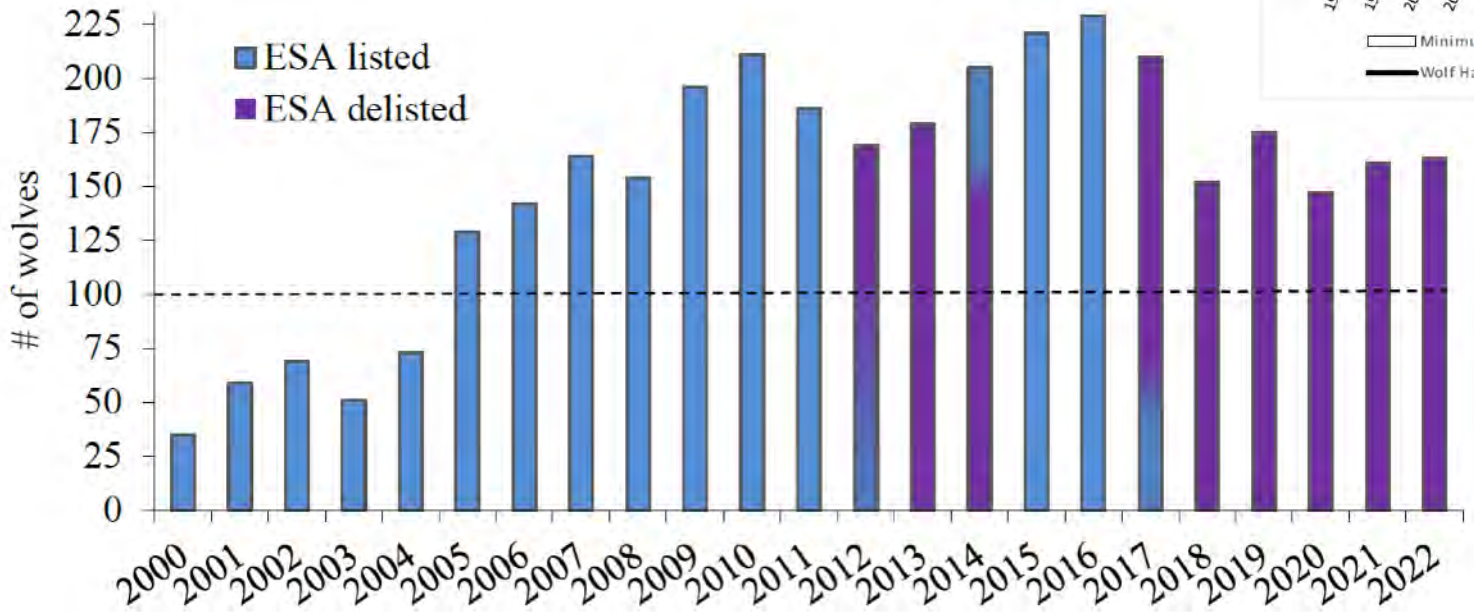
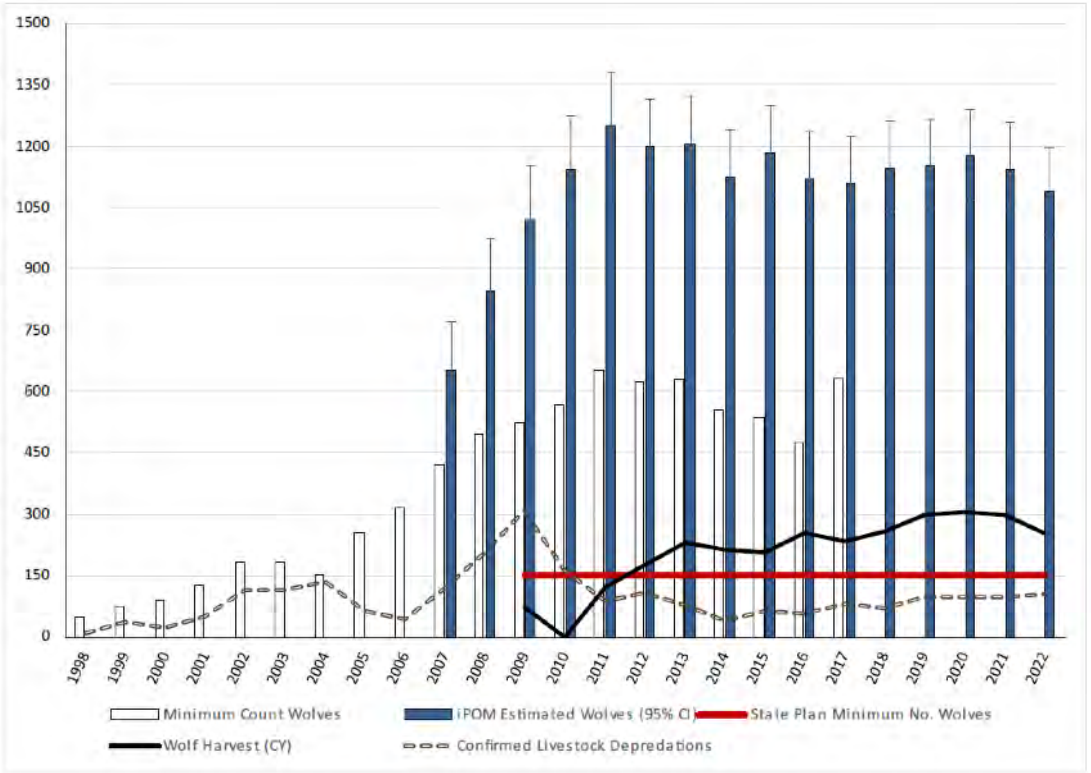
Can we hunt predators sustainably?

Wyoming WTMA (wolf hunt since 2012)





Montana (wolf hunt since 2009)

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Hunting as a management tool

- What is the “right” number of predators?

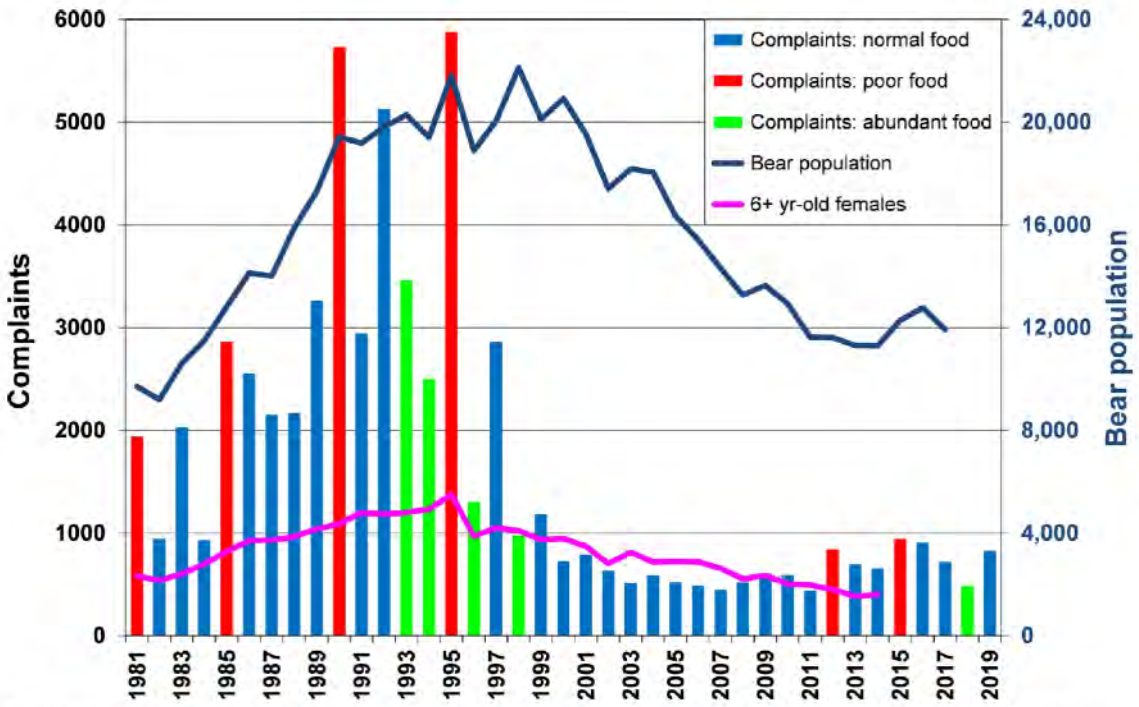


Fig 4. **Comparison of total bear complaints, population size, and yearly rating of natural foods.** Bear complaints rose sharply as the population of bears rose (population estimates not available for most recent 2 years). Complaints were especially high in years when natural summer and fall foods for bears were sparse, and were low when foods were abundant. A sharp decline in complaints occurred during 1998–2000 when the MNDNR phased-in a policy against translocating bears and greatly reduced on-site visits (Fig 1). Reduced complaints also corresponded with fewer prime-age females in the population.

Garshelis et al. 2020 (Minnesota bears)

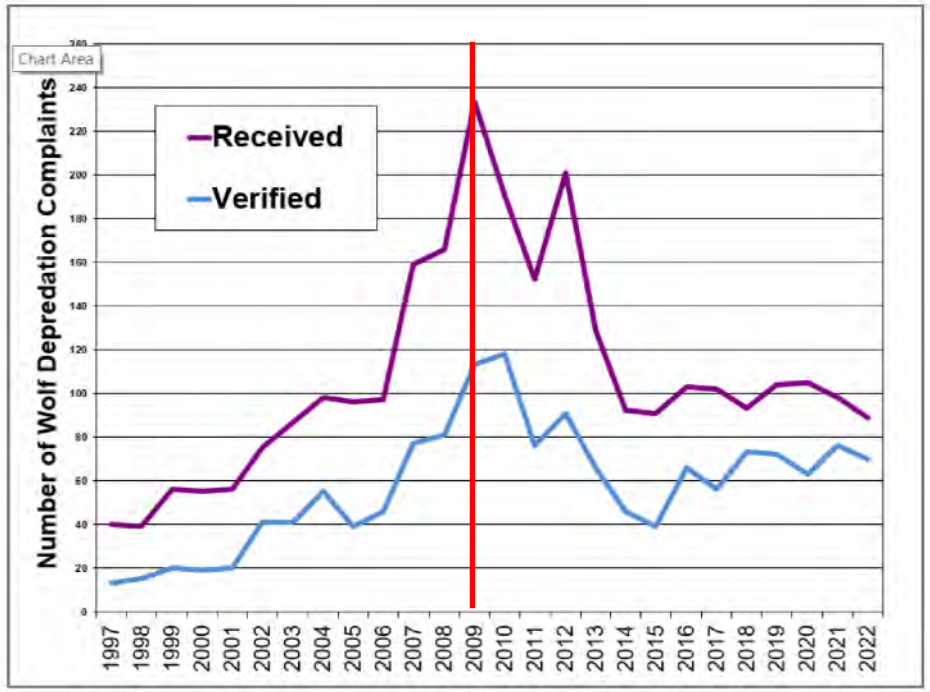
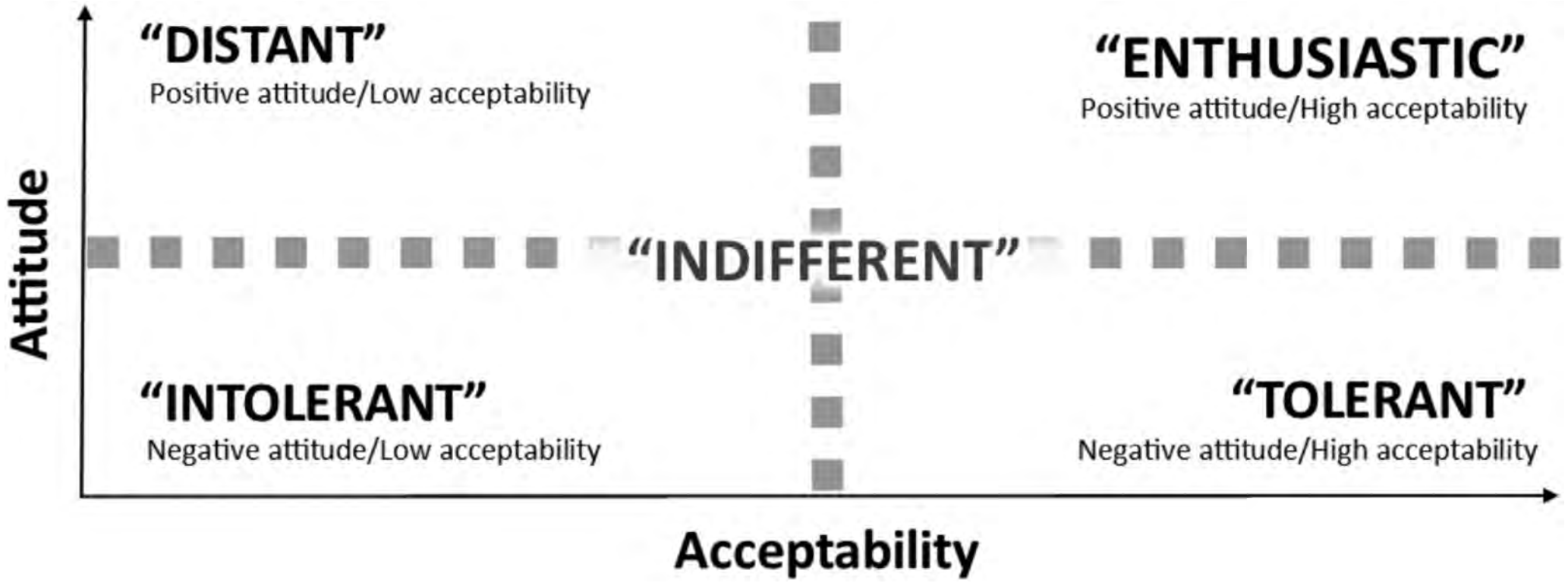


Figure 11. Number of complaints received by USDA Wildlife Services as suspected wolf damage and number of complaints verified as wolf damage, Federal Fiscal Year 1997-2022.

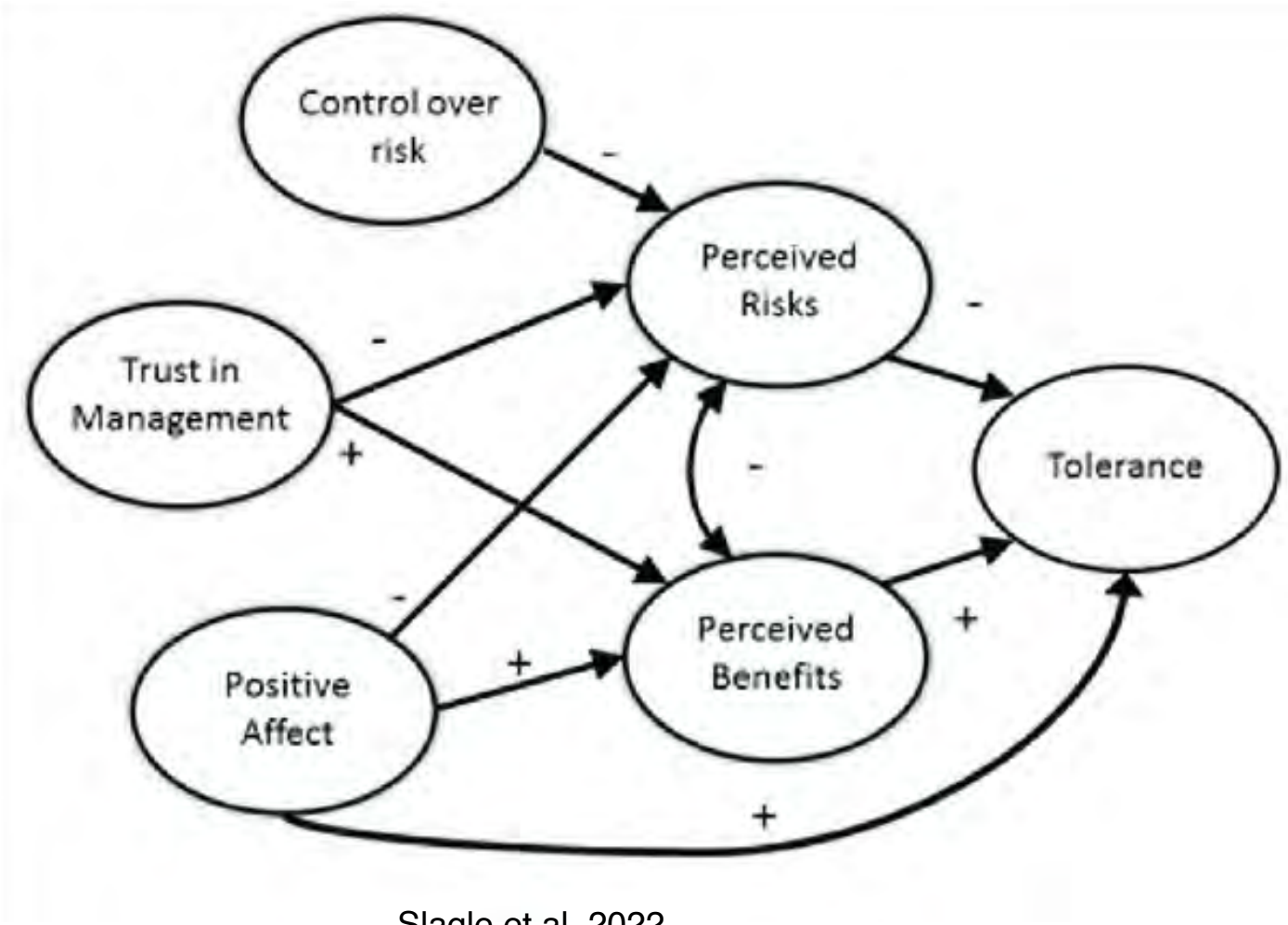
Montana FWP 2022 (Montana wolves)

Social Tolerance



Brenner and Metcalf 2019

Hunting and Social Tolerance



Slagle et al. 2022

SOCIETY & NATURAL RESOURCES
https://doi.org/10.1080/08941920.2022.2048152
Routledge
Taylor & Francis Group
Check for updates

"They Need to Be Managed:" Hunters' and Ranchers' Narratives of Increased Tolerance of Wolves after a Decade of Wolf Hunting

Jill Eileen Richardson
Department of Community and Environmental Sociology, University of Wisconsin, Madison, WI, USA

ABSTRACT
How do hunters and livestock producers who report increased tolerance for wolves account for the changes in their attitudes, and how

ARTICLE HISTORY
Received 19 January 2021
Accepted 18 February 2022

ELSEVIER
Biological Conservation
Volume 144, Issue 12, December 2011, Pages 3018-3027

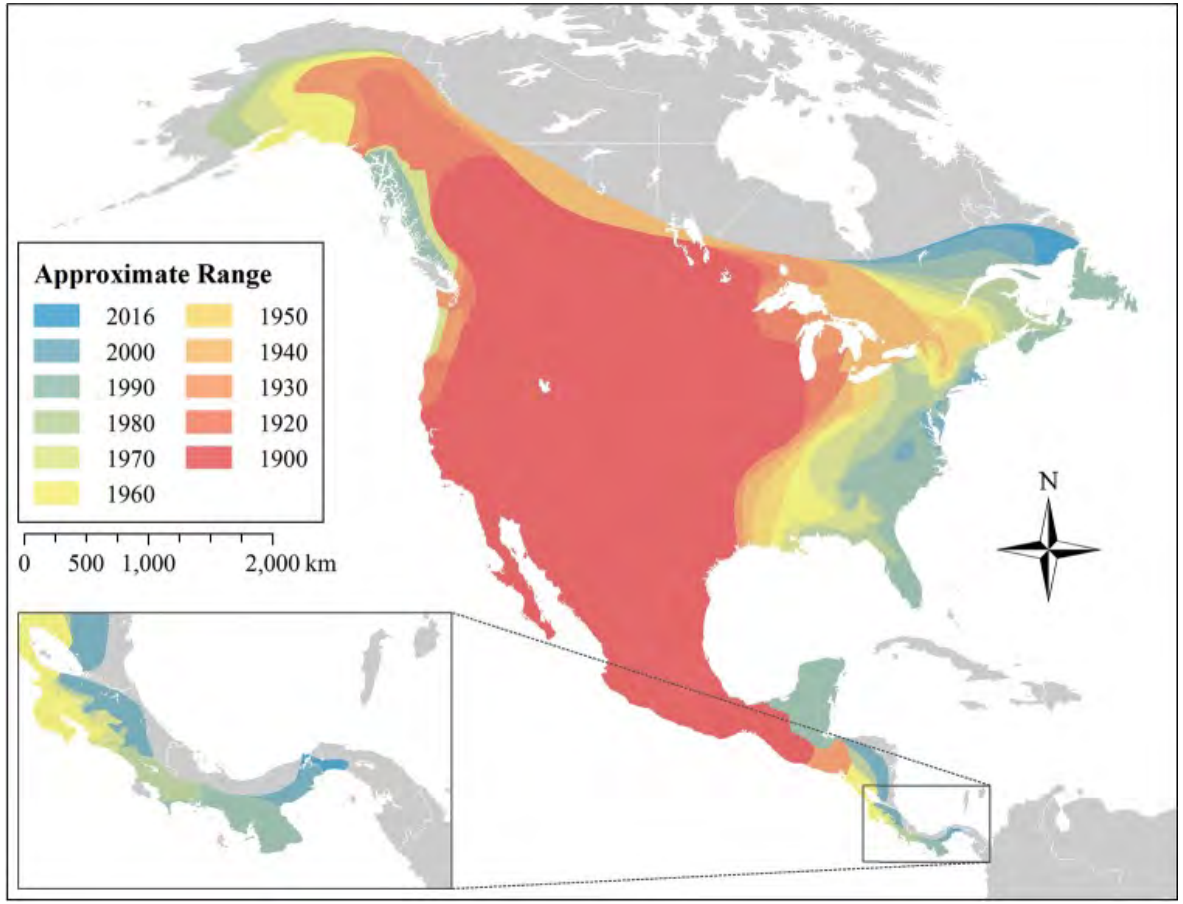
Dynamics of public attitudes toward bears and the role of bear hunting in Croatia

Aleksandra Majić [a 1], Agnese Marino Taussig de Bodonia [b 1], Đuro Huber [c], Nils Bunnefeld [b]

Show more

Predator Control

- Nothing new…
- One tool in the toolbox
- Abundant native predators
- Not applicable in every situation
- Not necessarily a long-term solution



Coyote range 1900-2016, Hodey and Kays 2018.

Sea Turtles and Raccoons (and pigs

Journal of Experimental Marine Biology and Ecology
Volume 395, Issues 1–2, 15 November 2010, Pages 147-152

Dramatic and immediate improvements in insular nesting success for threatened sea turtles and shorebirds following predator management

Richard M. Engeman [a], Anthony Duffiney [b], Sally Braem [c], Christina Olsen [c], Bernice Constantin [b], Parks Small [d], John Dunlap [b], J.C. Griffin [b 1]

Raccoon Removal Reduces Sea Turtle Nest Depredation in the Ten Thousand Islands of Florida

Ahjond S. Garmestani, H. Franklin Percival
Author Affiliations +

Southeastern Naturalist, 4(3):469-472 (2005). https://doi.org/10.1656/1528-7092(2005)004[0469:RRRSTN]2.0.CO;2

Facts About Sea Turtles & Raccoons

Raccoons destroy thousands of sea turtle eggs each year and are a one of the greatest causes of sea turtle mortality on Florida's beaches. This brochure provides information on how you can help protect Florida's sea turtles.

SEA TURTLE CONSERVANCY

Sea Turtle Conservancy
4424 NW 13th St, Ste B-11
Gainesville, FL 32609
352-373-6441
www.conserveturtles.org

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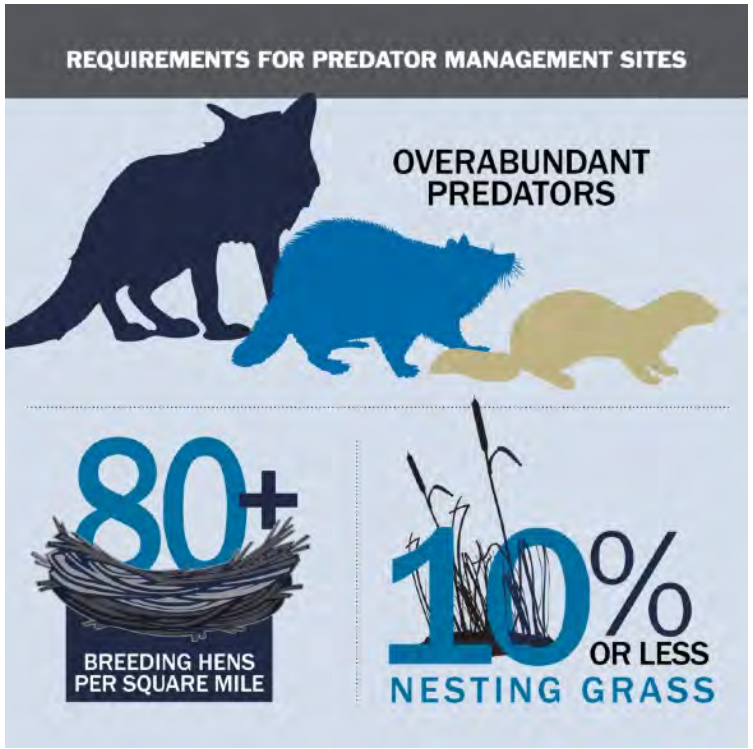
Ducks and skunks (and foxes and raccoons)

HIGH DUCK NESTING SUCCESS IN A PREDATOR-REDUCED ENVIRONMENT

HAROLD F. DUEBBERT, Northern Prairie Wildlife Research Center, U.S. Fish and Wildlife Service, Jamestown, ND 58401
JOHN T. LOKEMOEN, Northern Prairie Wildlife Research Center, U.S. Fish and Wildlife Service, Jamestown, ND 58401

Abstract: Duck nesting and production were studied during 1969–74 on a 51-ha field of undisturbed grass-legume cover and a surrounding 8.13-km² area in north-central South Dakota. The principal mammalian predators of ducks were reduced within a 259-km² zone from May 1969 through August 1971. Dabbling duck nest densities, hatching success, and breeding populations attained high levels. Seven duck species produced 1,062 nests on the 51-ha field during 6 years; 864 (81%) hatched, 146 (14%) were destroyed, and 52 (5%) had other fates. During 1970–72, when predator reduction was most effective, the hatching success for 756 nests was 94%. The number of mallard (*Anas platyrhynchos*) nests increased from 37 (0.7/ha) in 1969 to 181 (3.5/ha) in 1972. Mallard pairs increased from 2.8/km² to 16.8/km² on the 8.13-km² area during the same period. A minimum of 7,250 ducklings hatched on the 51-ha field during the 6 years, including 2,342 ducklings in 1972. Exceptionally high duck nesting densities and hatching rates occurred when predators were controlled.

J. WILDL. MANAGE. 44(2):428–437



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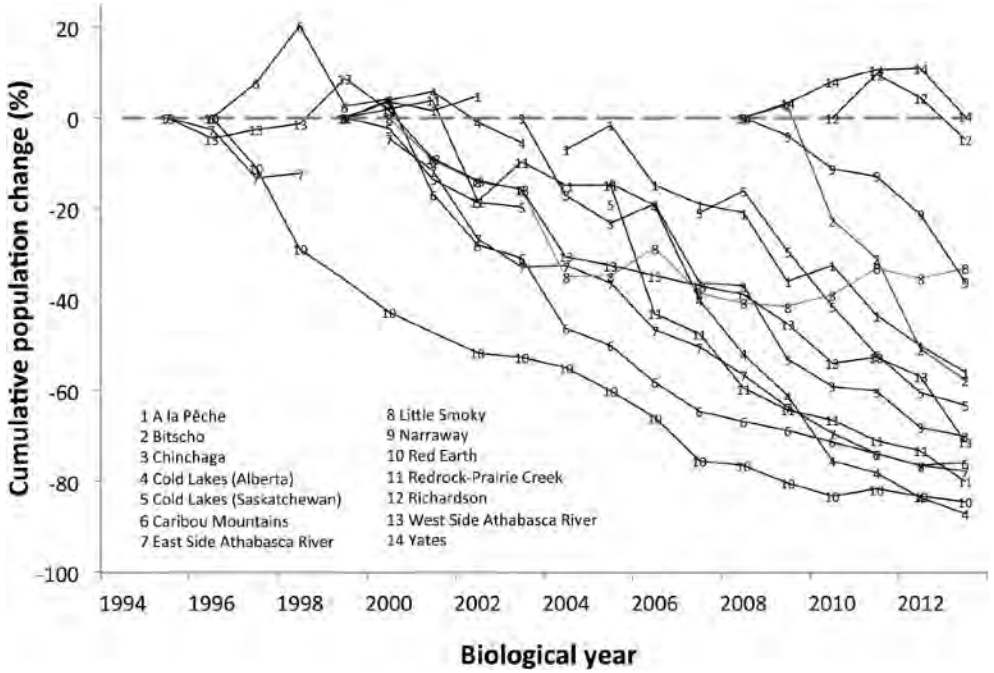
Woodland caribou and wolves



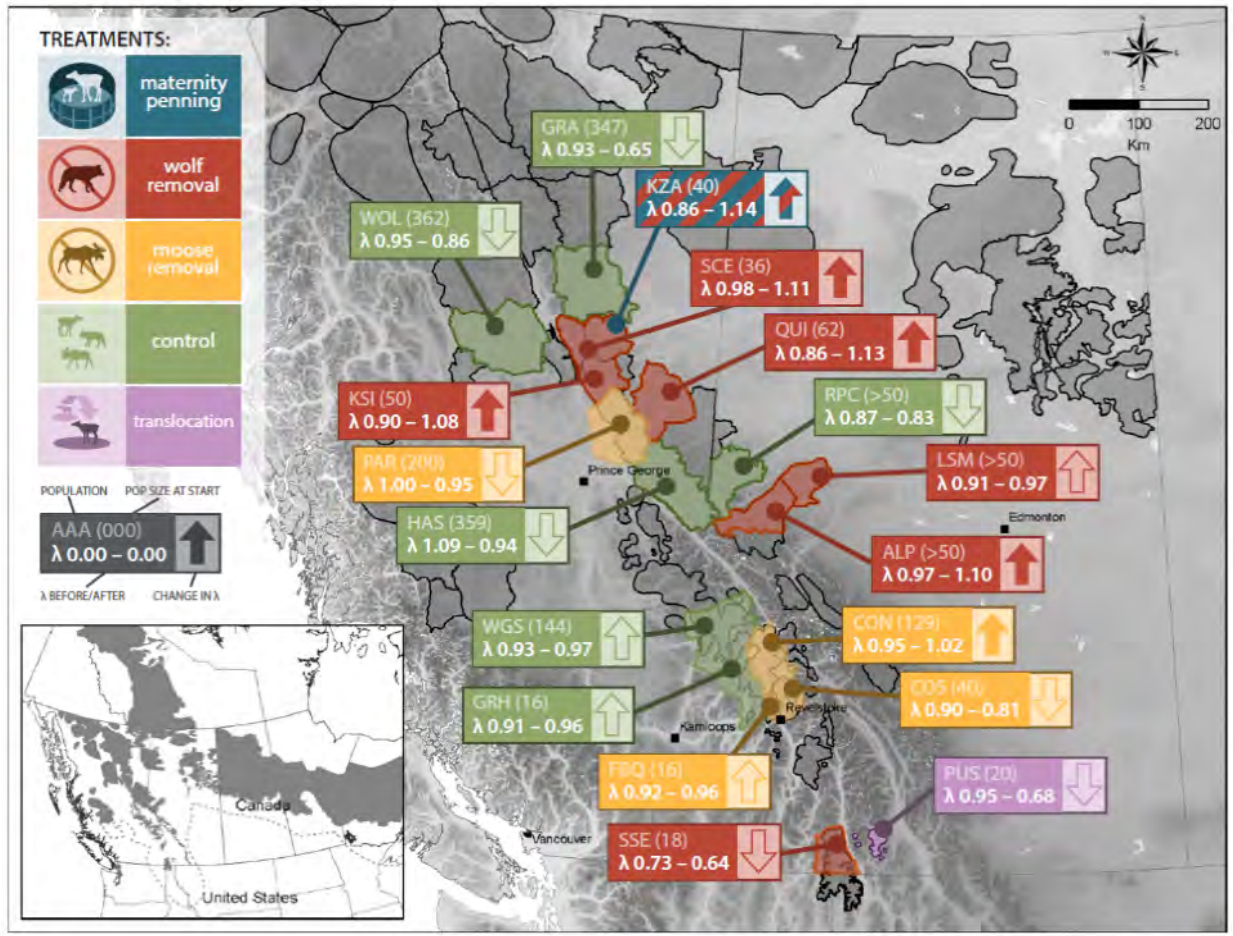


Fig. 2. Population growth rates (λ; 1 = stability) before and after treatments were initiated, with controls matched by a similar time period (*SI Appendix*, Table S1). Solid arrows indicate λ > 1. Population values apply to the beginning of treatment. Black outlines show woodland caribou range boundaries. (*Inset*) current (gray) and historic (dashed line) distribution in the contiguous United States and Canada. ALP, À la Pêche; CON, Columbia North; COS, Columbia South; FBQ, Frisby Queest; GRA, Graham; GRH, Groundhog; HAS, Hart South; KSI, Kennedy Siding; KZA, Klinse-Za; LSM, Little Smoky; PAR, Parsnip; PUS, Purcells South; QUI, Quintette; RPC, Redrock–Prairie Creek; SCE, Scott East; SSE, South Selkirks; WGS, Wells Gray South; WOL, Wolverine.

Serrouya et al. 2019

Take Homes

Predator Hunting

- Appropriate use of a valuable resource.
- Can be done sustainably and scientifically.
- Issues of societal carrying capacity.
- Likely to promote social tolerance.

Predator Control

- Important in management of rare and endangered species.
- Must be done deliberately and as part of an integrated management plan.
- Why remove a useful tool from the toolbox?

Thank You!

Questions?

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