



LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

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Brooks Fahy
Predator Defense
P.O. Box 5446
Eugene OR 97405

SUBJECT: Response to NRA assertion that predator control is critical to wildlife management

Dear Mr. Fahy:

At your request, I have reviewed NRAs assertion that “As it stands, lethal predator control remains the best tool we have for keeping large predators in balance with existing habitat and the prey they require.” I respond to this comment as an expert on the ecology and biology of large mammals (*particularly large predators*) and as co-founder and Principal of Live Oak Associates, Inc., (LOA), an ecological consulting firm based in California. During the last 35 years, I have conducted a number of studies on the cougar and have participated in numerous public policy debates as a carnivore expert in several western states regarding management options and conservations strategies for various species of carnivores such as the coyote, cougar, black bear and the federally endangered San Joaquin kit fox to name a few. More recently I have been using statistically robust spatial tools as a framework for predicting the effects that large perturbations or modifications of landscapes (*e.g., several thousand to tens of thousands of acres*) have on the suitable habitats and regional landscape connectivity for a number of carnivore species.

All too often, wildlife managers mistakenly rely on single species management paradigms that seek to naively manage wildlife for statis; a goal that is never achievable, and in reality, is not desirable. While conservation is often given lip service by these same state game agencies, almost all management of large carnivores is focused on killing carnivores through sport take, or broad efforts of Wildlife Services or other vector control agencies. This is why over the last decade, conservation biologists, such as myself, have focused on using spatial models that inform conservation at relevant spatial scales (*tens of thousands of km²*) as my colleagues and I have done for over 40,000 km² of the Southern California landscape for the cougar. Efforts that are focused on actual conservation of cougars and not simplistic models of moderating lethal take. Conservation strategies, I might add, that have as its explicit goals the preservation of cougars within a functioning ecosystem while reducing conflicts with humans – conflicts that are often perception based and not real, or mostly human management issues.

In 1971, several highly respected ecologists (*e.g.*, Stanley Cain, Starker Leopold, Durwood Allen, Maurice Hornocker, *etc.*) produced a report on the state of predator control in North America (*Report to the Council on Environmental Quality and the Department of the Interior by the Advisory Committee on Predator Control*). This report clearly assailed the industry of predator control, and pointed out the faulty reasoning behind most (if not all) predator control operations, the lack of science supporting the industry and the failure to actually solve or reduce predator conflicts with humans. They concluded in this official report:

“Our recommendations would change the present federal-state cooperative program drastically by concentrating on animals which cause damage, specifically by using non-chemical methods of control which would curtail the attrition against non-target species of ecological and social value. This remarkable program continues unabated in the face of criticism, largely on a basis of unvalidated assumptions.”

Sadly, the traditional vector control approaches championed by the NRA and in wide use by management agencies today, still fail to heed this sage advice offered (*actually demanded*) by this blue-ribbon panel of scientist. Whenever I deal with the naive and clearly false assertions of organizations such as the NRA regarding carnivores, I am reminded of Don Quixote’s quip in the musical *Man of La Mancha* “Facts are the enemy of truth”. Unfortunately, this is an attitude that is often shared by vector control professionals – an opinion that is simply inconsistent with predation theory or the scientific literature. The suggestions or speculations put forth by NRA are simply unsupported by science.

Many game agencies and wildlife services engage in management schemes that were assailed by the Cain Report (and more recent analysis) as too costly and ineffective. Furthermore, the attitudes expressed by these agencies fail to recognize that predation is an important and critical ecological process, without which, many systems become unstable.

For example, researchers in Southern California and elsewhere have found that coyotes serve an important function of maintaining the natural bird diversity. Their research demonstrated that coyotes were effective in reducing predation on native population of birds by house cats and feral cats, thereby resulting in a healthier ecosystem (*as defined by higher natural biodiversity*). Research in Yellowstone on the reintroduction of the wolf has found that wolf predation reintroduces important ecosystem function. For example, the presence of wolves has indirectly reduced coyote predation on pronghorn, resulting in increasing growth rates of the pronghorn (*see Joel Berger’s research*).

As noted so aptly by the Cain report over 40 years ago, efforts to reduce conflicts between predators and humans need to be based on sound science and reasonable assumptions. I would suggest the NRA review Taylor’s (*a theoretical ecologist*) 1984 book *Predation* (*while 25 years old, it still is an amazingly relevant treatment of predation theory – in my opinion it is one of the best, I believe, that exists*) (Taylor, R. J. 1984. *Predation. Population and Community Biology*. Chapman and Hall, NY). One small point of this treatise is his noting how the wildlife profession oversimplifies predation theory and that they largely rely on the findings of relatively short-term predator removal studies. He suggests that an equally valid (*and more consistent with predation theory*) interpretation of most predator removal studies is that short-term predator

removal may change the stability of the prey population, but the average equilibrium density remains relatively unchanged. As of 1985, he was unmoved that the literature provided any evidence that predator removal studies demonstrated any long-term benefit. A similar conclusion was reached a number of years later by the National Research Council (1997: *Wolves, Bears, and Their Prey in Alaska: Biological and Social Changes in Wildlife Management. Committee on Management of Wolf and Bear Populations in Alaska, Board on Biology, National Research Council, National Academy Press, Washington, DC*) for the on-going Alaska predator control effort where they concluded that “there is no factual basis for the assumption that a period of intensive control for a few years can result in long-term changes in ungulate population densities.”

Francis Bacon (*father of modern science*) more than 300 years ago concluded that “The quilt of the Senses is of two sorts, it either destitutes us or deceives us.” In other words, our perceptions and biases provide strong barriers to our understanding the natural world. A trap that the NRA’s simplistic and factually deficient assessment of the “value of predator control” clearly falls into.

As an example to demonstrate that the NRA’s simplistic view of predator control is inconsistent with reality - cougars have not been hunted in California since 1971 and California supports the largest amount of high quality cougar habitat in the North America and the greatest number of humans. About 110 to 120 cougars are killed annually in California mostly due to depredation on livestock or pets – a fraction of the kill total for most other smaller Western States (sport take in several of these states exceed 400 to 500 annually). If the NRA’s assertions were correct one would assume that California would have substantially greater human-cougar conflict. Yet when normalized for the size of the cougar and human population in each state and western Canadian province, California does not rank 1st, but ranks 11th. In other words, the risk of an attack by a cougar is greater in 10 other Canadian provinces and western states. California supports about 5 million cattle and nearly a million sheep (*more than all of western states except Texas*), and yet the absolute number of depredation incidences places it about in the middle. If we consider depredation rate, California would rank near the bottom as it does with attacks on humans. Completely inconsistent with the paradigm that predator control is a valuable and necessary management tool.

More recently, research in Northeastern Washington (*see research out of the Weilgas Lab*) has found that increased killing of cougars while it has reduced the cougar population, has resulted in increasing conflicts with humans, as younger male cougars, which become more prevalent in hunted populations, are more prone to prey on livestock than resident male and female cougars.

Another example is related to black bears. Garshelis and Noyce (*Garshelis, D. L. and K.V. Noyce. 2008. Seeing the world through the nose of a bear – diversity of foods fosters behavioral and demographic stability. Eds, T. E. Fulbright and D. G. Hewitt, pages 139 to 163 in Wildlife Science: Linking Ecological Theory and Management Applications. CRC Press. NY.*) argue that diversity in food resources is an important contributor to stability in bear populations. They caution that poor food years can increase sightings and conflict with bears, giving people the **perception** that bears numbers have increased, when in fact growth rates may have declined. In addition, some nuisance bears (*e.g., breaking into cars or homes*) are not as vulnerable to hunting as non-nuisance bears – thereby minimizing the effectiveness of hunting in reducing

conflicts. I own a home in South Lake Tahoe, and coyotes, bears and cougars are very much a part of my neighborhood (*my house backs up to a 1200 acre State Park that is connected to a National Forest and Desolation Wilderness occupied by all of these carnivores*); bears that roam through our neighborhood are much less vulnerable to hunting than those bears that occur in the backcountry with minimal contact with humans. Killing a bear not involved in conflicts with humans in the backcountry has no affect on the level of conflicts in the Tahoe Basin. At a recent meeting at Incline Village, Nevada State Wildlife Officials noted that the problem in the Tahoe Basin was not bears, but people.

Conflicts are more likely influenced by poor food years and the availability of human foods in or near human habitation. Thus, it is an unsupported assertion that predator control will likely reduce conflicts with bears in this circumstance.

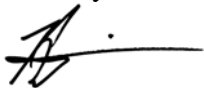
Essentially, we kill medium and large carnivores through sport take and prophetically control efforts (*e.g., wildlife services*) not because it has been shown (*scientifically*) to be an important management tool, but because it is tradition and is perceived as useful. It is based on an overly simplistic view of natural systems - one that is in conflict with both predation theory and evidence. In reality, we manage for the sport hunt, not by it. Taylor and the NRC certainly provide some rather sobering analysis that short-term predator control studies are extremely costly and they provide no real evidence that they provide any long-term benefit for minimizing conflicts or increasing prey populations.

In summary, many game managers and wildlife services expend considerable energy ignoring the best available science that clearly demonstrates efforts to manage predators by broad lethal efforts, fails. It is astounding that we have failed to heed the sound and evidence based recommendations of such revered scientists, as was part of the Cain Report and not shifted our focus away from costly and ineffective predator control programs to efforts that focus on removing the offending predator. It is disappointing that we find ourselves unwilling to move from severely failed management schemes to more cost effective and ecologically relevant ones.

While I could expend considerably more energy providing a more thorough review of the literature, I believe the above brief summary clearly illustrates the folly of the NRA's unsupported position on predator control.

If you have any questions regarding my analysis, please contact me at your earliest convenience.

Sincerely,

A handwritten signature in black ink, appearing to be 'A. Hopkins', with a horizontal line extending to the right.

Rick A. Hopkins, Ph.D.
Principal and Senior Conservation Biologist