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## Testimony on H. 60: February 17, 2017

I live in Stamford, in Bennington County. I have a Masters degree in Conservation Biology from AUNE. My thesis dealt with the ability of beavers to mitigate some effects of climate change. Written in 2 parts, it was both a review of the relevant scientific literature through 2013, and an illustrated book on the historic parachute drop of beavers in 1948 into the Idaho wilderness. Although my expertise is not specifically related to coyotes, I do feel qualified to testify to you today and appreciate the opportunity to do so. In addition to a general knowledge of ecology, I have researched apex predators and the role coyotes play in our ecosystems. (In fact, this will likely be the topic of my next book). I spend an enormous time in the Green Mountain National Forest behind my home and have, on several occasions, encountered coyotes. Every time, they have run away and avoided me as they typically do with humans.

The issues surrounding coyotes and all predators are important for scientists as well as wildlife managers to consider carefully right now as we all confront the effects of climate change, habitat loss, and human encroachment.

As an environmental scientist, I am concerned with the treatment of coyotes here in VT. The open season and the tolerance of multiple means of hunting including, trapping, shooting, hounding, and contests and derbies, seems wrong on multiple levels from ecological to moral.

My response to this House Act 60, is that it seems prudent, in fact necessary, to at least institute a regulated season on coyotes with mandatory reporting of kills in order to evaluate the role and presence of coyotes here in VT. A more precise population count needs to be established which will not be possible under the present management policy. The F&W website states there are between 4500 and 8000 coyotes in VT. That is a huge range, which really doesn't tell us much. With trappers and hunters not required to report coyote kills, how can their numbers be determined? Population studies need to be conducted by wildlife biologists. A set season based on the species' life cycle and avoiding the spring when pups are born and reared, should be established and strictly enforced. This should be designed according to and appreciating the current research findings that favor policies of co-existence.

I sent you all a copy of an article in the current issue of the Journal of Mammalogy entitled "Carnivore conservation: shifting the paradigm from control to coexistence." The authors present data from a wide range of professional perspectives including wildlife biology and management, ecology, social science, ethics, law, and policy. They discuss 5 categories of reasons why mammalogists and conservation biologists should be interested in shifting government agencies as well as society at large, toward replacing predator

removal with non-lethal means of wildlife conflict resolution. Numerous studies cited demonstrate that the lethal removal of predators results in loss of biodiversity and ecosystem resilience, un-necessary killing of non-target species (a common occurrence with trapping), and ineffective of control of livestock predation. They also question ethical and societal considerations of killing carnivores. The authors conclude that nonlethal methods of preventing depredation of livestock by large carnivores may be more effective than lethal methods.

If one studies coyote biology, this clearly makes sense. About the most adaptable species in North America, coyotes can adjust their reproductive cycles in response to stress. Over -hunting or the killing of the breeding pair, will result in juveniles maturing faster and litter size increasing to compensate for pack losses. In addition, the loss of the breeding pair will change pack social behavior and cause greater aggression toward livestock and domestic animals. In other words, coyotes become more aggressive and more numerous if over-hunted. The intelligent response by wildlife managers should be to promote coexistence and educate farmers about nonlethal means of protecting livestock. In addition to the above argument, it would benefit all of us to tolerate and respect coyotes for the immeasurable role they play in controlling the rodent population, dispersing native plant species, and cleaning the woods of carrion. The argument frequently used by hunters that coyotes persecute the deer herd is ridiculous. They are predators who will cull the herd of weak animals and will certainly consume some fawns in the spring (as will black bear). But most of their food (up to 90% depending on the season) consists of rodents and small mammals. In fact, we owe a huge debt of gratitude to coyotes for their role in controlling the white mouse population. These rodents, a favorite coyote meal, are the carriers of Lyme and other tick borne diseases that are becoming a major public health hazard.

My family has a small horse farm and over the years we have had free-range chickens living in our barn, lots of cats and dogs as well as horses, a mini pony and a mini donkey. We also have coyotes here. We have never had an issue with any of our animals involving coyotes--who are often in our pasture on summer nights. In fact, we have had just about every other VT native predator after our chickens, but never a coyote. And our small mini pony and donkey tolerate them. We have on two occasions been horrified to find coyote carcasses in our woods where they had clearly been tossed away like trash by hunters.

I have unfortunately found myself exposed to numerous offensive and sadistic posts and photos on social media made by Vermont's coyote hunters. They demonstrate a complete ignorance about this species, both the biology and environmental role, as well as a horrifying lack of respect for our native wildlife. Many coyote killers possess a passionate hatred of these apex predators. They vilify and objectify the species with a disturbingly intense hatred clearly based on myth rather than fact. The coyote killing contests now taking place in VT make no sense scientifically, morally, or ethically and are counterproductive as a means of controlling this species. Hounding is also deplorable. It is particularly sadistic and inhumane not only to the intended victim of the hunt but also to the many domestic dogs who are put in harm's way.

As I have already stated, coyotes are a necessary and important element to a functioning ecosystem. We need to co-exist with them in order to keep Vermont's environment healthy. It should be the responsibility and mission of the F&W Dept. (who readily admit that coyotes do not impact the deer herd) to better educate their constituency about the environment, the critical predator-prey cycle which balances predator populations with those of their prey, and to appreciate the many valuable roles living coyotes play in our ecosystems.