

SENIOR COUNSEL
C.D. MICHEL*

SPECIAL COUNSEL
JOSHUA R. DALE
ERIK M. NAKASU
W. LEE SMITH

ASSOCIATES
ANNA M. BARVIR
MICHELLE BIGLARIAN
SEAN A. BRADY
SCOTT M. FRANKLIN
BEN A. MACHIDA
CLINT B. MONFORT
JOSEPH A. SILVOSO, III
LOS ANGELES, CA

* ALSO ADMITTED IN TEXAS AND
THE DISTRICT OF COLUMBIA



OF COUNSEL:
DON B. KATES
BATTLEGROUND, WA

RUTH P. HARING
MATTHEW M. HORECZKO
LOS ANGELES, CA

WRITER'S DIRECT CONTACT:
562-216-4444
CMICHEL@MICHELLAWYERS.COM

October 1, 2015

Mayor Robert Garcia
333 West Ocean Blvd., 14th Floor
Long Beach, CA 90802
Email: mayor@longbeach.gov
Via Hand-Delivery and E-Mail

Re: Local Coyote Problems & Department of Fish & Wildlife Involvement

Honorable Mayor Garcia:

The City of Long Beach is experiencing a problem common to many other locales in California and across the country, aggressive urban coyotes. More and more of these municipalities are coming to the grim realization that these nuisance coyotes pose a significant threat to the safety of their residents. A recent coyote attack in the City of Irvine on a three-year-old girl who was accompanied by adults at the time shows just how serious, even deadly, this threat is. This young child was not the first victim of nuisance urban coyotes. And unfortunately, she won't be the last, unless something is done by local officials.

Our office has been retained by a consortium of Long Beach residents who are seeking real solutions to the coyote problem. While it is commendable that the Long Beach City Council is actively engaging on this serious public safety issue, it is also troubling that the Council seems to be accepting propaganda from radical "animal rights" groups as being legitimate solutions grounded in science or supported by legitimate experts in the field. In truth, many of the claims made by these groups are neither. For example, the groups can't pinpoint *any* science supporting so-called "hazing" as a viable approach to managing nuisance coyotes. The real experts on coyote behavior have concluded, *in peer reviewed scientific papers*, that "hazing" does not work. And of course, this ignores the reality that *hazing is quite likely illegal* in the first place.

You should know that the same groups misleading you about the validity of using hazing are also currently lobbying the California Fish and Game Commission ("FGC") to place protections on coyotes that would dramatically increase coyote populations and limit the city's

ability to manage nuisance coyotes. The truth is that these groups seek to protect coyotes at all costs. They do not care if their policies exacerbate local nuisance coyote problems.

We urge the Council to tell the FGC in no uncertain terms that it should reject any further protection of coyotes that would increase coyote populations, and should instead compel the Department of Fish and Wildlife to fulfill its duty to your constituents to “alleviate economic losses or public health or safety problems caused by wildlife.”¹ Not only is it the prudent thing to do to avoid legal liability for your city, it is the right thing to do. Demand that the FGC protect your residents before more pets or children are harmed—or killed!

The True Agenda of Radical Animal Rights Special Interest Groups

Radical animal rights groups have been representing themselves as “conservationists” or “ecologists” and claim to be the authority on appropriate coyote management measures. They are not. The goal of these groups is not to create a public policy that reasonably balances the needs of mankind, civilization and wildlife—with public safety being a paramount concern. These groups are solely interested in advancing their “animal-rights” agenda—no matter what the societal cost. The CEO of the Humane Society of the United States (“HSUS”), Wayne Pacelle, has publicly stated: “We are going to use the ballot box and the democratic process to stop all hunting in the United States. We will take it species by species until all hunting is stopped in California. Then we will take it state by state.”² And they are doing just that.

HSUS has recently proposed that coyotes should only be allowed to be taken if a near-impossible-to-get permit is issued first.³ This would eliminate general coyote depredation efforts that have been part of an overall nuisance animal management process that has proven successful at keeping dangerous coyotes (and other dangerous predators) from disrupting farming and ranching, and has kept them out of suburban areas—until recently. This is part of a larger HSUS effort to replace the long-term success of the North American Game Management Model with an unbalanced and unproven approach that allows predators like wolves, black bears, grizzly bears, mountain lions, coyotes and other predator species to overpopulate and expand their territories—right into our backyards.⁴

In a nut shell, radical “animal rights” groups like HSUS are advocating a special agenda in place of valid regulation and balanced wildlife management science. Local officials should carefully consider whether it is appropriate to take advice on coyote management policy from

¹ Cal. Fish & G. Code § 1801(g); *see also* Fish & G. Code § 1802 [“The department has jurisdiction over the . . . management of . . . wildlife . . .”]

² <http://www.humanewatch.org/creeping-hsus-kudzu-in-california/>

³ <http://michellawyers.com/wp-content/uploads/2015/04/Predator-Policy-HSUSProject-Coyote-Recommend-3.pdf>

⁴ *What Is Rewilding?*, The Rewilding Institute, <http://rewilding.org/rewildit/what-is-rewilding/> (last visited Sept. 25, 2015).

biased interest groups like HSUS (not to be confused with local humane societies⁵) or Project Coyote. HSUS's various ethical scandals should be enough to disqualify the group from participating in developing public policy.⁶ But, more importantly, HSUS's and Project Coyote's "predators first" approach is inconsistent with elected officials' responsibility to their constituents. Those groups cover-up the realities of urban nuisance coyotes and the genuine threat they pose to pets and humans to protect them so that they proliferate and reduce game herds to make hunting unsustainable.⁷ That is their end game.

The Unnatural Urban Coyote

Some people say we should leave urban coyotes alone and learn to "co-exist" with them "because they were here first." But that is not the case. Coyotes came from the Great Plains to the west coast following human settlers.⁸ They traditionally remained in areas outside of human reach, or remained cautiously stealth to avoid human interaction. They are now coming more often to urban areas where they never previously existed *because* of humans, not despite them, and exhibit no fear of humans.⁹

Some people understandably resist supporting the trapping or culling of coyotes as a necessary wildlife management tool because they love nature. This heartfelt response is understandable, even commendable to a degree. All decent people want to respect and protect nature. But it is disingenuous to claim that urban coyotes are "natural" when they are anything

⁵ The Humane Society of the United States (HSUS) and local humane societies are distinguishable—and at times, antithetical. HSUS is a multi-million dollar national fund-raising company that operates no local animal shelters. Online activist watchdogs like www.activistfacts.com assert that very little HSUS funds are actually directed toward caring for animals, suggesting that HSUS exploits the sympathetic positions of animals for the sole purpose of economic gain to push its radical anti-hunting agenda. Local humane societies, on the other hand, are small, independent, non-profit entities that focus on rescuing and housing animals for the purpose of caring for the animals and finding them homes.

⁶ See http://www.humanesociety.org/about/overview/annual_reports_financial_statements.html; <http://www.humanewatch.org/unpacking-the-hsus-gravy-train-2013-edition>; <http://www.humanewatch.org/hsus-has-quietly-sent-26-million-to-the-caribbean>; <http://www.humanewatch.org/hsus-and-co-defendants-pay-15-75-million-in-racketeering-lawsuit>; and http://www.oklahomafarmreport.com/wire/news/2014/02/08109_StateAttorneyGeneral02182014_162046.php#.VE1FWk10yJD.

⁷ For more on this, visit www.HumaneWatch.org.

⁸ Gese, E.M., Bekoff, M., Andelt, W., Carbyn, L. & Knowlton, F. 2008. *Canis latrans*. The IUCN Red List of Threatened Species, Version 2014.2 available at: <http://www.iucnredlist.org/details/3745/0> ("Coyotes were believed to have been restricted to the south-west and plains regions of the U.S. and Canada, and northern and central Mexico, prior to European settlement . . . With land conversion and removal of wolves after 1900, coyotes expanded into all of the U.S. . . . (Moore and Parker 1992).")

⁹ <http://goodnature.nathab.com/urban-animals-wildlife-is-adapting-to-city-life/> (According to Stan Gehrt, a professor at Ohio State University who has been studying urban coyotes in Chicago: "It's believed that because food and water are more readily available in cities, the urban animals are faring better than their rural cousins.")

but. The reality is that there is very little that is “natural” about the urban nuisance coyote. In the rural environment, coyotes and other predators have a limited food source. But in the overflow urban or suburban environment that coyotes inhabit as their numbers in the wild overflow, coyotes have an easy-to-obtain and reliable food source in the form of trash and domestic pets. So their populations increase and their territories expand. The urban coyote’s lifespan is artificially high compared to its rural counterpart, and the urban coyotes’ pups’ survival rate is five times higher than rural coyote pups.¹⁰

Nor is the nuisance coyote’s behavior in urban areas “natural.” “The coyote that saunters down a suburban residential street in broad daylight, ignoring the presence of humans, exhibits strikingly different behavior from a coyote that lives in the wild . . .”¹¹ Public officials should be very concerned about this, because “habituated animals, those who have developed a psychological patience with our presence, are potentially much more dangerous than non-habituated, or ‘wild’ animals . . .” *Ibid.* Specifically, there is no precedent for urban coyotes acting as aggressively as the ones currently roaming Long Beach and surrounding areas are acting. Do not believe this is “natural.”

“Hazing” Coyotes Does Not Work, and May Be Illegal

HSUS and Project Coyote suggest “hazing” as the main method for dealing with suburban coyotes. Some cities have adopted this approach, after being misled to believe it is the prevailing conventional wisdom on how to deal with suburban nuisance coyotes. *It is not.* “Hazing” was invented by these Radical animal rights groups, and its use has ***no scientific basis*** nor support from wildlife experts. To the contrary, the foremost experts in the field of coyote behavior and management have dismissed hazing as an untenable solution for the sort of coyote problems plaguing urban areas throughout California and the country. “The main problem with most fear-provoking stimuli is that animals soon learn that they pose no real threat and then ignore them,” explains Claude Oleyar in his University of California Davis published paper (a copy of which is attached to this letter). Professor Rex Baker has also explained that: “Once coyotes have begun acting boldly or aggressively around humans, it is unlikely that any attempts at hazing can be applied with sufficient consistency or intensity to reverse the coyote habituation. In these circumstances, removal of the offending animals is probably the only effective strategy.”¹²

¹⁰ Gehrt, Stanley D.; Brown, Justin L.; and Anchor, Chris (2011) "Is the Urban Coyote a Misanthropoc Synanthrope? The Case from Chicago," *Cities and the Environment (CATE)*: Vol. 4: Iss. 1, Article 3. Available at: <http://digitalcommons.lmu.edu/cate/vol4/iss1/3> [quote or summary?]

¹¹ Schmidt, Robert H. and Timm, Robert M., "BAD DOGS: WHY DO COYOTES AND OTHER CANIDS BECOME UNRULY?" (2007). *Wildlife Damage Management Conferences -- Proceedings*. Paper 71, Page 14. http://digitalcommons.unl.edu/icwdm_wdmconfproc/71

¹² Baker, Rex O., "A REVIEW OF SUCCESSFUL URBAN COYOTE MANAGEMENT PROGRAMS IMPLEMENTED TO PREVENT OR REDUCE ATTACKS ON HUMANS AND PETS IN SOUTHERN CALIFORNIA" (2007). *Wildlife Damage Management Conferences -- Proceedings*. Paper 58. http://digitalcommons.unl.edu/icwdm_wdmconfproc/58

These expert researchers have unequivocally found in *peer reviewed studies* that coyote and certain other predator populations must be actively managed by humans to avoid predator species becoming brazen and threatening to humans. Professor Rex Baker, PhD., one of the foremost experts on coyotes, explained in his work “Management of Conflicts between Urban Coyotes and Humans in Southern California” (a copy of which is attached to this letter) that “[W]hen coyote attacks on pets have begun to occur in an area, it is imperative that the problem be corrected by use of trapping, so as to prevent escalating human-coyote problems, including attacks on people.” In sum, the experts do not promote hazing.

Moreover, some forms of “hazing” appear to be illegal. The law prohibits “harassing” wild animals. To “harass” means to perform an intentional act that disrupts an animal’s normal behavior patterns, *including, but not limited to*, sheltering, breeding, and feeding.¹³ With few and limited exceptions, harassment of wildlife is a criminal misdemeanor.¹⁴ The popular methods of “hazing” proposed by animal rights interest groups, which include chasing and throwing things at coyotes when seen in an urban area, likely fit the definition of “harassing.”

In any event, under the Humane Society’s and Project Coyote’s recommended “hazing” policy, the urban coyote populations have still soared, while these coyotes have become more aggressive and more successful in places they were never seen previously. Hazing is simply impractical, unsafe, ineffective, and likely illegal. The Council should directly ask those who claim otherwise if they have credentials at least similar to those of Dr. Baker. If they do not, then they should not be relied on in formulating such important policy.

Trapping and Sterilizing or Relocating Coyotes is Particularly Problematic

Some have suggested that cities should trap and sterilize or relocate coyotes. But neither is an option. While it is legal to trap certain nongame mammals including coyotes using specified methods, the trapped mammals *must be immediately* euthanized or released. Cal. Code Regs. tit. 14, § 465.5(g)(1); Cal. Code Regs. tit. 14, § 679(f)(4). In other words, the law prohibits both sterilizing trapped coyotes and releasing them to new locations at or near the same location where it was trapped if it is not going to be euthanized.

Sterilization may also be illegal “harassment,” since its purpose is to disrupt an animal’s normal breeding patterns. Moreover, even if sterilizing was legal, it does not address the immediate problem, which is aggressive behavior. If not all coyotes are sterilized, some pups will still learn the bad behavior. And, even if all coyotes in an area were sterilized, it could take years to see results, if ever, since outside coyotes would likely just move in to fill the void.

¹³ Cal. Code Regs. tit. 14, § 251.1.

¹⁴ Cal. Fish & Game Code § 12000.

This Council Needs to Take Action Locally and at the State Level

Coyotes do not recognize city borders. So ultimately local, or even regional, action alone cannot be the solution, even if it involves removal of coyotes. Without active management of predators like coyotes by the state Fish & Wildlife authorities, this rapidly over-populating and dangerous predator species will continue to overrun more and more neighborhoods and cause more and more harm. The next three-year-old attacked by one may not be as lucky as the little girl in Irvine, as some have tragically not been.¹⁵

Sadly, the FGC has repeatedly *rejected* requests from individuals for assistance with managing the growing problem of aggressive urban coyotes and urban coyote attacks, stating that such is “*beyond the authority*” of the FGC.¹⁶ The FGC has not, however, specified any legal basis for its position and we cannot find any. Nor has the FGC offered any indication of who else has the authority to address this issue, or offered any suggestions for how local governments are to achieve, let alone fund, ameliorating this snowballing issue. Local effects are simply being brushed off. This of course does not necessarily absolve the City of legal liability for injury caused by coyotes since the City has notice of the danger they pose to the public.¹⁷ It should, however, serve as an additional incentive for the City to seek answers from the FGC.

We urge the Council to demand that the FGC explain their basis for claiming they have no authority on this issue, and—if they are going to leave it all up to local governments—to explain exactly what local governments have the authority to do about this serious local wildlife management problem. The FCG should also be asked to explain how local governments can obtain support and funding for combating this problem. At the same time, the Council should tell the FGC to reject the efforts of extremist “animal rights” groups to protect the coyote no matter what the cost to humans or other wildlife populations. Explain that your constituents demand a solution to your city’s coyote problem now, and that the Commission’s goal should be a reduction in negative human-coyote encounters, not more coyotes.

The FGC will be addressing predator management in upcoming meetings this year and next, and it seems that the urban coyote issue would be a key consideration underlying that

¹⁵ See, e.g., *Kelly Keen Coyote Attack*, Project Gutenberg Self-Publishing Press, http://self.gutenberg.org/articles/kelly_keen_coyote_attack (last visited July 24, 2015); *Coyote Bites, Drags 2-Year-Old Girl at Orange County Cemetery*, NBCLA.com, <http://www.nbclosangeles.com/news/local/Coyote-Bites-Drags-Toddler-at-OC-Cemetery-216600781.html> (last visited July 24, 2015); *3-Year-Old Girl Bitten By Coyote in Irvine*, ABC7 Eyewitness News, Los Angeles, <http://abc7.com/pets/3-year-old-girl-bitten-by-coyote-in-irvine/737235/> (last visited July 24, 2015).

¹⁶ *Decision List for Non-Regulatory Requests Received Through October 8, 2014*, California Fish and Game Commission, November 10, 2014, http://www.fgc.ca.gov/meetings/2014/dec/Exhibits/33B_1_DdecisionListNon-RegulatoryAction11102014.pdf (last visited July 24, 2015).

¹⁷ See Gov. Code, §§ 835-835.4 [providing municipal liability for certain dangerous conditions] and *Arroyo v. State of California* (1995) 34 Cal.App.4th 755 [wild animals can constitute such a dangerous condition].)

discussion. So now is the time. Learn more about when and where FCG meetings take place at <http://www.fgc.ca.gov/meetings/2015/>.

Conclusion

Nothing in this letter is meant to suggest that people and coyotes cannot coexist to some extent, nor that ethics must be abandoned in resolving the urban coyote problem. But, "coexist" does not mean tolerating coyotes eating pets and besieging peoples' homes and streets so residents are afraid to take a walk in their own neighborhoods. Coyotes should be afraid of people, as they are in nature, not the other way around. Contrary to what the "animal rights" groups assert, and in line with what the experts in the field say, there are effective, humane methods for establishing a healthy balance between mankind and coyotes.

If the Council has any questions or concerns about the contents of this letter, please feel free to contact me at your convenience.

Sincerely,
Michel & Associates, P.C.



C.D. Michel

CDM/llq

Encl. Baker Research
Oleyar Research

cc: Via Hand-Delivery and Email to:
City Attorney Charles Parkin, cityattorney@longbeach.gov
Councilmember Lena Gonzalez, district1@longbeach.gov
Councilmember Suja Lowenthal, district2@longbeach.gov
Councilmember Suzie Price, district3@longbeach.gov
Councilmember Daryl Supernaw, district4@longbeach.gov
Councilmember Stacy Mungo, district5@longbeach.gov
Councilmember Dee Andrews, dee.andrews@longbeach.gov
Councilmember Roberto Uranga, district7@longbeach.gov
Councilmember Al Austin, district8@longbeach.gov
Councilmember Rex Richardson, district9@longbeach.gov


4-1-2007

A REVIEW OF SUCCESSFUL URBAN COYOTE MANAGEMENT PROGRAMS IMPLEMENTED TO PREVENT OR REDUCE ATTACKS ON HUMANS AND PETS IN SOUTHERN CALIFORNIA

Rex O. Baker

California State Polytechnic University, Pomona, CA

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A REVIEW OF SUCCESSFUL URBAN COYOTE MANAGEMENT PROGRAMS IMPLEMENTED TO PREVENT OR REDUCE ATTACKS ON HUMANS AND PETS IN SOUTHERN CALIFORNIA

REX O. BAKER, Professor Emeritus, California State Polytechnic University, Pomona, CA, USA

Abstract: Since the fatal coyote (*Canis latrans*) attack on a 3-year-old girl in Glendale, California in 1981, government agencies have emphasized developing coyote management programs to increase public safety. This presentation will focus on the success of numerous programs including: small neighborhoods, industrial sites, parks, large city and county-wide projects. Local environmental conditions attracting coyotes, specific problems caused by the coyotes, public reaction, and the role of public relations including public education emphasizing environmental management, will be discussed. Coyote population monitoring regarding behavior patterns, aversive conditioning, and coyote population reduction methods will be reviewed. Trapping remains the most effective tool in removing problem coyotes and re-instilling the fear of humans in most cases; however, calling and shooting by well trained personnel are also a very important tool and sometimes the only option. However, factors in the environment influenced by human behavior must be changed to prevent re-occurrences of urban coyote conflicts with humans and pets. Wildlife must always be considered to be wild, not cuddly friends!

Key words: coyote, coyote behavior, coyote human attacks, coyote pet attacks, human safety, urban coyote, wildlife/human safety

Proceedings of the 12th Wildlife Damage Management Conference (D.L. Nolte, W.M. Arjo, D.H. Stalman, Eds). 2007

INTRODUCTION

Prior to the tragic fatal coyote (*Canis latrans*) attack in August 1981 on a 3-year-old girl, Kelley Keen, in Glendale, California (Howell 1982, Baker and Timm 1998), coyote control programs in the United States were primarily implemented to protect livestock and poultry. The attack was also a warning to the public that coyotes do present a risk to human safety despite the constant denial of numerous animal rights groups. The social and political atmosphere in California urban areas leaned heavily towards protecting all wildlife; and pleas to protect pets and humans from coyotes had been resisted by most governmental

agencies despite seven reported human-injury attacks and numerous pet losses to coyotes in nearby communities of Los Angeles (LA) County over the four preceding years (Howell 1982). There had also been concern for over a decade about bold coyotes in yards, parks, streets, and other populated areas both day and night. Many residents even reported coyotes looking through sliding glass doors and windows at their pets, laying on patio chaise lounges, and chasing dogs through doggy doors, etc. (Howell 1982).

The tragic loss of a young child abruptly changed the balance of social and political attitudes, and a plan for coyote

management was developed despite protests and court action filed by animal rights and animal welfare groups against some agencies and the parents of the child (Robert Howell, Deputy Agricultural Commissioner, Los Angeles County retired; Richard Wightman, Deputy Agriculture Commissioner, Los Angeles County retired; and Capt. Michael S. Post, Glendale Police Dept., pers. comm.). The program evolved over several years by local and Los Angeles County agencies has served as a model for development of other urban coyote management programs.

THE FIRST SUCCESSFUL URBAN COYOTE PROGRAM

Glendale, Los Angeles County, 1981

Following the fatal coyote attack on the 3-year-old girl, an immediate evaluation of the attack site and surrounding suburban area was conducted by the Los Angeles County Agriculture Commissioner's office and Glendale Humane Society personnel, with input from the state Department of Fish and Game. This action was requested by the Glendale City Police Department and the County Board of Supervisors (Howell 1982). Coyote populations were found to be abnormally high. The diet was found to be high in anthropogenic items such as pet food, garbage, small pets, avocados and other fruit, vegetable gardens, and seeds and fruit from ornamental plants, as well as cottontail rabbits and small rodents (Howell 1982, Wirtz et al. 1982, Shargo 1988, Baker and Timm 1998). It is also important to note that a neighbor of the Keen family had been asked by the parents to stop feeding coyotes and other wildlife due to the increased coyote activity (Robert Howell, Deputy Ag. Commissioner retired, pers. comm.).

According to Howell, an immediate, large-scale public safety program, developed

by the County Agriculture Commissioner and the Glendale Police Department, was initiated utilizing all local news media regarding coyote hazards, hazing techniques, how to protect children and pets, and to inform the public that traps were going to be set for coyotes. The program also had a coyote complaint and information phone line to help calm the public and to gather information on other potential problem areas. An area with a radius of half a mile (0.8 km) from the attack site was defined as the specific target area. Padded, offset-jaw leghold traps were the primary method used; however, due to the extremely high coyote numbers and boldness of this population, shooting was also implemented in specific safe areas. Within 80 days, 55 coyotes had been trapped or shot within the target area (Howell 1982). The removal of these coyotes and the change of habitat brought about by the education program drastically reduced reports of pet attacks, and there was no report of further human injury in Glendale for over 20 years (Lt. Todd Stokes, Glendale Police Department, pers. Comm.)

Glendale Police Department assigned Captain Michael S. Post to coordinate this urban coyote management program in the city; he did so for nearly 20 years. The coyote hotline continued, following the initial control period, as did other forms of monitoring coyote behavior, and public education. These programs were locally operated by the police department, which advised citizens on human and pet safety, prevention of attractive habitats, hazing methods, and other essential information. Coyote activity monitoring remains an integral part the program. This program is now under the direction of Lieutenant Todd Stokes, who now refers people to coyote web sites but continues to monitor calls related to coyote activity. Suspected coyote problem activity areas are referred to the Agriculture Commissioner's

biologists, who further evaluate the area and provide residents with more public education and/or implement a trapping program targeting the specific problem coyotes in the immediate areas. The biologists and trappers continue to evaluate the programs effectiveness by monitoring the coyote population to prevent future problems.

According to Howell (1982), in addition to the Glendale program, a long-range plan to help protect the public from future attacks or damage from coyotes was initiated by the Los Angeles County Board of Supervisors, as the Agriculture Commissioner was directed to implement education and assist other city animal control agencies and unincorporated areas in the county with the management of coyotes. Current budgetary constraints make it necessary for incorporated cities and home owner associations (HOAs) to now contract with the commissioner or with private Nuisance Wildlife Control Operators (NWCOs) for these services (Jim Hartman, Acting Deputy Agriculture Commissioner, pers. comm.). The commissioner's program continues to be very effective in educating the public on coyote issues and has active coyote management programs in numerous communities within Los Angeles County. However, some communities wait until the coyotes are too habituated to the urban habitat to easily change behavior by hazing or removal of one or two coyotes. In these situations, a larger number of coyotes may need to be removed in order to stop or prevent human injury. Some communities, including Calabasas (Conrad Burton, Los Angeles Agriculture Commissioner Office, pers. comm.) Hidden Hills (Troy Spillman, Wildlife Management Professionals, personal communication), and Diamond Bar (William Taber, Inland Valley Humane Society, pers. comm.), have continued to educate the public and monitor coyote

behavior change. They also contract with the Los Angeles County Agricultural Commissioner or private NWCOs to investigate, and when necessary, trap and euthanize coyotes in specific target areas to prevent them from becoming bold enough to cause human injury. An increase in pet losses or coyotes approaching humans is most often what initiates calls to the person monitoring coyote activity. These communities have not had reports of human injury by coyotes, and they report that pet losses are significantly lower than prior to program initiation. A more recent, proactive task the Los Angeles Agriculture Commissioner initiated in 2004 was the formation of the "Urban Wildlife Management Association," which serves to pool resources from numerous other agencies and wildlife management stakeholders, including universities and private industry that have an interest in "Safely Managing the Los Angeles County Biodiversity". This forum has been used to discuss many human/wildlife conflict issues, and it has improved communication between participants on numerous sensitive issues regarding the need for wildlife management in urban settings.

OTHER SUCCESSFUL PROGRAMS

A portion of this discussion will relate program initiation, effort, and success to observed changes in coyote behavior that indicate an increasing risk to human safety (see Timm et al. 2004). These stages of behavioral change are often predictable and occur in this sequence:

1. An increase in observing coyotes on streets and in yards at night.
2. An increase in coyotes approaching adults and/or taking pets at night.
3. Early morning and late afternoon daylight observance of coyotes on streets and in parks and yards.

4. Daylight observance of coyotes chasing or taking pets.
5. Coyotes attacking and taking pets on leash or in close proximity to their owners; coyotes chasing joggers, bicyclists, and other adults.
6. Coyotes seen in and around children's play areas, school grounds, and parks in mid-day.
7. Coyotes acting aggressively toward adults during mid-day.

Generally, the earlier in the sequence the coyote management program is initiated, the lower the amount of resources needed and the higher the chances of success in preventing attacks on humans.

Griffith Park, City of Los Angeles, July 1995

Rangers noted in early summer 1994, four months prior to the first human injury attack, coyotes frequently being seen during early and late daylight hours in Griffith Park. Coyotes were also often seen chasing or carrying cats (*Felis catus*) and rabbits (*Sylvilagus* spp.) in turf and picnic areas. Remains of cats, skunks and rabbits were commonly found in these public use areas. This stage 3 and 4 coyote activity should have been noted as a precursor to increased bold coyote activity. By late summer, visitors began reporting coyotes begging for food, followed by people retreating to cars or areas away from their picnic meals while bold coyotes fed on what was left. In October 1994, an adult male was bitten on the leg or foot. In the following spring and summer days (noon to 5 pm), five adults were attacked and injured, and a 15-month-old girl was attacked and carried from a car seat on a picnic table for some distance before her mother was able to beat off the coyote and rescue the child (Baker and Timm 1998; Capt. Hector Hernandez, Griffith Park Head Ranger, pers. comm.). The child had been partially protected by a

heavy jump suit but still suffered numerous puncture wounds to the thigh.

The first step in developing an urban coyote program is a site inspection and evaluation. This was done by the author, who was brought in as a consultant to the Los Angeles City Park Rangers and the City Council, who were alarmed by a coyote attacking a child. Human food scraps were found in numerous trash cans and around bulk dumpsters, which had large holes in the bottom and sides. Scat found on trails near two specific attack locations within the park contained food wrapping material, chicken bones, and skunk and cat hair. Bedding areas used by coyotes were littered with the same items, as well as with rabbit and cat remains (Baker and Timm 1998). Attractive habitat conditions noted included heavy bush and landscaping around grassy picnic and play areas, plentiful human food, feral cats, rabbits, and unwary humans.

As the second step, the city was advised to post coyote danger warning signs and to provide handout information to all persons entering the park, asking them to report coyote sightings to rangers, who were to aggressively haze the coyotes near public use areas whenever patrons were in the park. However, this coyote population had been hazed using noise devices since the first bite incident, with little apparent change in coyote behavior.

The third step in the program was to hire a team of trained sharpshooters, due to the immediate threat to public safety, to remove coyotes in specific target areas until acceptable coyote behavior was observed, and to remove the animal that attacked the child. The fourth step was habitat improvement, addressing thinning and skirt removal of shrubs, covering trash cans, replacing damaged dumpsters, enforcement of the wildlife feeding ban, public education, discouraging feral cat feeding, and documentation of coyote activity. The

habitat modification was not to be initiated until after the direct control of coyotes was accomplished, in order to avoid an increase in bold coyote behavior and/or a change in coyote activity patterns.

Calling and shooting was initiated in two specific target areas after park closing. Five alpha adults and three young adults were removed during two nights in July, within three days of the attack on the young child. The last coyote taken was an adult female whose canine teeth measurement and condition (a blunt, broken upper canine tooth) closely matched the bite wound pattern on the child. Since removal of these two family units, there have been no further attacks or bold-acting coyote problems, even though many coyotes populate the adjacent wildland area of the 4,000-acre park. Coyotes seen were very wary of humans for over 10 years. Recent personal communication with park ranger Doug Kilpatrick (February 2007) indicates that many of the coyote warning signs are now gone, public education is more limited, and habitat modification efforts implemented following the attacks have decreased, resulting in increased daytime coyote sightings.

North West Laguna Nigel Area, Orange County, September 1991

One adult male, while walking the pet near his home, was chased by a coyote and had his poodle taken out of his arms and off of the leash. The poodle was killed, and the man was shaken up but not bitten (Baker and Timm 1998, Timm et al. 2004). Coyote activity in the area was observed to have been at stage 4 prior to the attack, and a trapping program and public education started immediately after this stage 5 incident. Attractive habitat conditions noted included heavy landscape and adjacent brushy canyons, available garbage on two trash days per week, loose house cats,

rabbits feeding on turf, ornamental fruit (*Ficus nitida*), and routine walking of small dogs.

Padded leghold traps were set in nearby active trials in the adjacent canyon. Two coyotes were trapped within 100 yards of the attack site in two nights, and no more coyote sign or sightings were seen for the balance of the 10-day trap period. There was no re-occurrence of bold coyote activity or daytime sightings. Pet losses in the whole area subsided for one year, and there were only incidental cat losses for at least 6 or 7 years.

Southeast Laguna Nigel, Orange County, June 1995

Two adult males were bitten on the feet and ankle areas, one at night and one in mid-morning. Just prior to these bite incidents, six adults and several children were chased away from a chicken dinner at their patio table by a coyote that refused to leave until it had eaten its fill and then took the rest of the chicken with it. The coyote acted very aggressive towards anyone trying to scare it away (Baker and Timm 1998, Timm et al. 2004).

Attractive habitat conditions noted included heavy landscaped areas (slopes) only several blocks from native brush, pet food in yards, small dogs and cats, garbage out for trash collection, and rabbits and numerous small native and commensal rodents in the landscaping. Stage 3 and 4 coyote activity was noted for several months before this stage 7 activity. Both public and local governmental agencies reacted with public news releases, and HOAs sent out flyers on coyote safety and prevention of attacks, while notifying residents that trapping was to be initiated. A site survey revealed trails behind most residences. However, the only coyote bedding areas and dens were found in landscaping on one hillside about two blocks south of the bite

attack sites and in an undeveloped 10-acre hillside and a 50-acre park about a quarter-mile north of the bite sites, but within 50 yards of where the dinner party had been interrupted. Leghold traps were placed in trails leading from both areas, but not near the park due to the numerous walking trails. Traps were placed where trapped animals would most likely not be seen by the public. It appeared that two family coyote units were involved. Seven coyotes were trapped and euthanized. There were no reports of human attacks or incidents for the following 7 years; coyotes were occasionally sighted at night, but they were very wary of humans.

Forster Ranch Area, San Clemente, Orange County, May 1992

A 5-year-old girl was bitten on her back while climbing a ladder on her swing set, trying to get away from a coyote that had jumped the rear wall of her yard from a heavily landscaped bank (Baker and Timm 1998). The child's mother heard her screams and chased the coyote away with a garden implement. The public and governmental agencies and the HOA reacted quickly with safety and coyote prevention information. According to San Clemente Animal Control Administrator Gene Begnell, there had been about a month of reported dog and cat attacks (8 in all), and coyotes were regularly seen day and night on the streets and in yards. There was stage 3, 4, and 6 coyote activity reported prior to the attack. A licensed childcare facility had reported having a coyote in the rear yard play area every morning about 7:30 to 8:30. The coyote stalked the play area and laid in wait for some time before leaving. This activity was observed by the author and a NWCWCO employee. Attractive habitat conditions noted included heavily landscaped overgrown common area slopes, pet food, garbage, small pets, pet water, numerous landscape fruits, and rabbits and

rodents around lawn and garden areas. Leghold traps were placed on several active trails in protected landscape areas and on several trails in adjacent brushy and grass land areas, trapping five coyotes. Two coyotes were shot at night in an area heavily used by dog walkers in early morning, where traps could not be set. Following the program, coyotes were no longer seen in daylight hours, and when seen at night they shied away from humans. This development is surrounded on two sides by thousands of acres of native brush and grasslands and is in a canyon where two large drainage areas join from the mountains to the east. There is an abundant coyote population in this area, which has been closed to hunting for years.

Forster Ranch Area, San Clemente, Orange County, October 2001

Nine years after the first bite incident, several children were bitten by one coyote on a school playground. Wildlife Services shot two coyotes (Timm et al. 2004; Terry Cox, USDA, Wildlife Services, pers. comm.)

Forster Ranch Area, San Clemente, Orange County, August 2005

A 4-year-old boy was bitten on the shoulder while in a park in Forster Ranch. Wildlife Services shot one coyote (Terry Cox, USDA, Wildlife Services, pers. comm., Swegles 2005)

South San Clemente, Orange County, March 1997

A 2-year-old girl was being boldly stalked by a coyote, while with her father and another man working in the back yard. The father noticed the coyote in a "freeze mode" a few feet away, locked onto the child as a prey item. The coyote was crouched for attack when the father grabbed the child and began shouting and slowly backing away and into the house. The

coyote slowly crept closer until the other man hit it several times with a 2×4 to break off the attack mode, and the coyote slowly moved a short distance away (Baker and Timm 1998). Fortunately, the child did not move before her father grabbed her, as the coyote would most likely have attacked, since movement of prey is often the key stimulus for attack (Lehner 1976).

The coyote returned at the same time every morning, coming all the way up to the same sliding glass door the father and child retreated. The coyote would then lay in wait behind low shrubs within 10 feet of where the child had been. This behavior continued until the coyote was trapped in the yard. Attractive habitat conditions noted included adjacent heavy brush, a compost pile, a vegetable garden in the back yard, and a heavily-fruiting *Ficus nitida* tree in the front yard, neighbors' pet food, house cats, rabbits and rodents, and a neighbor's coy pond, all of which appeared to be sources of food and water.

Observed coyote activity that was reported to the HOA and San Clemente Animal Regulation covered stages 1 through 5 prior to this incident. Two coyotes were leghold-trapped in the yard, an adult male and female, and another two were trapped within 200 yards, on canyon trails entering the neighboring streets. Three others were taken about one mile away, where a coyote had been frequenting a rear yard in the daytime, frightening the resident. One week into the 10-day trapping project, all signs of coyote tracks on trails leading into the HOA from the south and east canyons stopped. The HOA began a heavy skirt pruning project and continued distributing instructions in newsletters to residents regarding how to avoid attracting coyotes and other wildlife. As of November 2001, there had been no more human/coyote encounters or heavy pet losses reported in this immediate area.

San Juan Capistrano, Orange County, January 1997

Eleven adult employees were attacked or harassed in the employee parking lot and on sidewalks of the Nichols Corning Institute, a 100-acre facility. This facility was surrounded by native chaparral to within about 20 yards of some buildings, and many native plants were planted in the landscaped areas to maintain a natural environment theme. There was also a large pond surrounded by lawn areas, giving a serene meadow look. For years, coyotes were only observed from a great distance occasionally, but for about two years prior to 1996, observed behavior advanced to stage 1. In summer 1996, about 9 months prior to the attacks, it increased to stages 2 and 3. By late fall 1996, stage 4 activity was noted, as coyotes were observed chasing rabbits and raccoons (*Procyon lotor*), and coyotes were also observed begging food from employees at lunch time. Some employees were reportedly observed feeding the noon-time beggars. By December, the author was contacted by the health and safety officer to ask about the behavior and what they could do to change it. They were advised to inform employees of the dangers of coyotes that had lost fear of man, and they were given advice on hazing methods, as Institute management did not want to harm the coyotes. Guards and shuttle drivers began to harass the coyotes with horns and chasing. In late December, coyotes began entering the employee patio at noon when it was crowded, sending everyone back into the buildings. Employees were told not to take food outside or to put food items in outside trash cans. Outside trash cans were removed or tightly covered.

Employee reaction varied greatly among the 1,000 employees. Some were scared to go outside for lunch, while a few nature lovers liked to get close to and feed

or watch the intruders. When word spread that some coyotes might be trapped in order to re-instill fear of man into the bold ones, People for the Ethical Treatment of Animals (PETA) and other animal rights groups contacted Institute management with threatening letters from their national headquarters, warning Nichols Coming not to harm the coyotes. In early January, coyote behavior increased to stage 7, when a total of five female and two male employees were attacked and another four were stalked and chased by very aggressive coyotes but avoided physical contact. Coyotes were primarily attacking people and taking purses, lunch pails, and bags, most likely looking for food that they had been getting from begging and out of trash cans. One woman was bit twice on the ankle and pulled to the ground while she and another woman beat the coyote off and began yelling for help. She retreated to her car and went to the hospital, and subsequently began rabies treatment. One man was bitten on the shoe, and another man wearing a backpack was jumped on from behind. Most purses and other items taken by coyotes did not have any food in them. Attractive habitat conditions noted at the location included human food scraps from trash and some handouts, rabbits, raccoons, skunks, coy fish, and water.

Shooting was recommended, as coyotes were coming from two fenced private properties. It was reported to management by the woman taking the rabies treatment that PETA would no longer interfere: it seems a coyote bit a PETA contact, who quickly had to face the reality of the hazard of feeding coyotes. The shooting was done at night when fewer employees were on site, and in two specific safe zones. Calling to these areas and shooting produced two adult coyotes the first night. A break of several days was taken to see if these were the only bold

animals, but control was resumed after two more men were attacked. Three more coyotes were taken in one night. Sign was then read on coyote trails, and shooting was ceased and no traps were placed, due to lack of coyote activity.

All employees attended a mandatory wildlife safety class, and a brochure on wildlife was published by the employer. Plantings were thinned and a lot of brush cleared, and trash tightly secured. According to the Health and Safety Officer, Bill Maxfield (pers. comm., February 2007), there has been no signs of bold coyotes day or night for over 10 years.

Arcadia, Los Angeles County, November 2004

The city of Arcadia only had occasional use of a coyote management program, when coyotes were reported spooking race horses at Santa Anita Race Track or patrons at the Los Angeles Arboretum. However, after November 2004, when a woman received a bite on her leg while standing next to her dog, they began a year-round program. They now closely monitor all calls and contract with a NWCO or the Los Angeles County Agriculture Commissioner for investigation and direct coyote control, whenever they get pet attack calls (Linda Garcia, City of Arcadia, pers. comm.). The city had been getting complaint calls of observed coyote behavior changes encompassing stages 1 to 5 before the 2004 attack, but now they only get reports of stage 1 or 2 behavior.

AVERSIVE CONDITIONING AND COYOTE POPULATION REDUCTION METHODS

In observed coyote behavior at stages 1 and 2, a fair level of success was often obtained by use of various hazing or aversive conditioning methods, when practiced consistently every time coyotes

were observed in close proximity to humans. The effect could last for several months or even years. However, in stages 3 and beyond, any changes in coyote behavior due to hazing was usually temporary, only lasting a few weeks or months (depending on the methods used), unless one or more coyotes was trapped or shot. Trapping and removal of several coyotes was most effective at re-instilling the fear of man into the balance of the coyote population. The following hazing and aversive conditioning methods have been found to be at least partially effective:

Human behavior: Yelling, waving arms, and act threatening towards coyotes in populated areas. However, be safe and never corner a coyote or approach one with young nearby.

Sound devices: Firing starter pistols or .22 caliber blanks, air horns, banging pans, fire crackers, whistles, or playing loud radios (news or talk shows).

Motion activated devices: Spotlights, strobe lights, motion-activated water sprinklers (Scare Crow™), are most effective when sound is also incorporated with these methods.

Projectiles: Throwing or using a slingshot to lob rocks, golf balls, or marbles at coyotes.

Non-lethal firearms (shooting to scare): Paintball guns, BB guns, and pellet rifles seem to be used most effectively; however, local and state laws often restrict some of these uses.

Trapping: Capture with leghold traps and subsequent release, as a method to re-instill fear of humans into problem coyotes, has been attempted, but it only seems to develop trap-wise (trap-shy) animals. However, when leghold traps are used to take and euthanize the animal, it works well to extinguish bold behaviors within the population, especially if the alpha male and/or female are taken. Originally,

steel-jawed traps padded with several layers of burlap were used, and later rubber-padded Soft Catch™ traps were employed. However, a trap ban passed in California in November 1998 allows only padded leghold traps to be used when officially authorized to resolve a threat to human safety by coyotes. There are several effective leg snares, as well as the Collarum™ neck snare, that have been proven to be useful in urban settings; however, they are more labor-intensive and can't be as easily placed as the Soft Catch™ trap. Like the offset and Soft Catch™ leghold traps, they allow the release of nontarget animals. Leg or foot injuries have never been much of a problem, in my experience, due to use of a short chain, double swivels, and shock springs. The Soft Catch™ trap is the most humane leghold trap, especially for nontarget animals. The Collarum™ does seem to further reduce the chance of injury over leg snares, but is only designed to be used in a cubby set so the target animal can only reach the baited trigger from the front.

Target animals are often euthanized by shooting them in the brain area with a .22 caliber short or CB cartridge, or they are put down with other methods recommended by the American Veterinarian Medical Association. When traps are used in urban areas, they are checked twice daily. Traps have proved to be more effective than shooting at putting the fear of man back into coyote populations.

DISCUSSION

Reducing the risk of future coyote attacks on humans and pets is possible. It is a responsibility those in charge of public safety, wildlife management, animal regulation, and park management must take seriously in urban, suburban, and rural areas. The methods have been well tested and proven over the last 25 years, and they are listed here in order of importance:

Programs to Prevent Coyotes from Losing Fear of Humans

1. Public education to inform citizens about wildlife, what habitat components attract animals, and effective hazing methods.
2. Development of statutes to prohibit feeding wildlife and regulate refuse handling.
3. Develop coyote behavior monitoring regarding daytime activity, boldness to humans, pet losses, and human conflicts.
4. Initiate coyote population reduction when needed.

Programs for Existing Bold Coyote Problems

1. Public education to warn about safety for humans and pets.
2. Initiate monitoring of coyote behavior to pinpoint and evaluate potential problems and specific target areas.
3. If necessary, and when feasible, start trapping or shooting in specific target areas.
4. Continue to monitor behavior, as trapping of one or two coyotes may re-introduce fear into the target coyote family group.
5. Public education to eliminate components of attractive habitats, such as food, water, shelter, and friendly humans.

The following statement is, in my opinion, still accurate: *“Once coyotes have begun acting boldly or aggressively around humans, it is unlikely that any attempts at hazing can be applied with sufficient consistency or intensity to reverse the coyote habituation. In these circumstances, removal of the offending animals is probably the only effective strategy”* (Timm et al. 2004). Public education is the key to getting citizens to have a good understanding of the problem and its causes, so that effective urban coyote management programs can be

implemented with enough public support to reduce future attacks on humans and pets.

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How Misinformation Fosters Urban Human-Coyote Conflicts

Claude M. Oleyar

Equalizer Wildlife Services, Colorado Springs, Colorado

ABSTRACT: The Colorado Division of Wildlife (CDOW) recently conducted an urban coyote symposium for city decision-makers in the Denver metro area in response to a burgeoning coyote problem, including multiple attacks on humans. The symposium was well organized, but it conveyed typical messages about managing human-coyote conflicts that I contend are misconceptions and misinformation. They include: we're encroaching on coyote habitat; coyotes that attack pets and people are abnormal; lethal control should only be used as a last resort; killing coyotes simply produces more coyotes; we should coexist with our "coyote neighbors"; hazing is the answer; and "it's a people problem, not a coyote problem". I dispute these concepts, and I contend that promoting the components of coexistence can actually foster human-coyote conflicts. In the process I also support the case for lethal control.

KEY WORDS: abnormal behavior, *Canis latrans*, carrying capacity, coexisting, Colorado, Colorado Division of Wildlife (CDOW), coyotes, habituation, hazing, human-coyote conflicts, lethal control, urban wildlife

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INTRODUCTION

In February 2009, I attended an urban coyote (*Canis latrans*) symposium organized by the Colorado Division of Wildlife (CDOW). The symposium was directed at city decision-makers in the Denver metro area who were being confronted with a burgeoning aggressive coyote problem. Pets were being attacked and killed on a daily basis, and at least 3 people had been bitten in recent months. There had been at least 9 documented attacks on people in Colorado in the past 5 years. The purpose of the symposium was to address the problem, educate people about coyotes, clarify the CDOW's role in dealing with the problem, lay out options for resolving the problem, facilitate development of coyote management plans by each city, and promote a collaborative effort among the various entities.

Addressing these issues is complicated by two very significant factors: 1) Amendment 14 to the Colorado constitution, which largely prohibits the use of foothold traps and snare devices to take wildlife, and 2) the enterprise status of the CDOW, which has statutory responsibility to manage state-owned wildlife. Amendment 14, which was adopted in November 1996, contains restrictions that make it very difficult to use prohibited devices in situations of human health/safety and allow no exemption for the protection of pets. The CDOW, being funded primarily by license fees and no state tax revenue, has limited personnel and financial resources to direct toward urban wildlife management. Consequently, the Division has been reluctant to engage the urban coyote problem. These two factors largely frame how we in Colorado handle urban human-coyote conflicts.

Much of the information presented at the symposium was credible and helpful, e.g., we can't eradicate coyotes, coyote relocation is not practical, re-instilling fear of people is essential, humans feeding coyotes exacerbates the problem, etc. However, there were other sound bites and messages (some subtle or even subliminal; some blatant) with which I disagree. In fact, collectively I

believe they can actually foster human-coyote conflicts rather than mitigate them. The purpose of this paper is to address some of this misinformation in detail, in an effort to create a more balanced and accurate picture of what's actually going on with urban coyotes and how to best manage them. Some of my points are well supported and documented by scientific research, while others are more anecdotal or speculative.

POINTS OF CONTENTION

"We're living in coyote country!"

The implied messages are these: Denver is built on historic coyote habitat; coyotes were here first; we are encroaching on their habitat; coyotes have a right to be here. Historically, human encroachment on wildlife habitat and loss of habitat have negatively impacted many wildlife species, but the coyote isn't one of them. Coyotes have benefitted from human alterations to the North American landscape. And while historically we've displaced coyotes in some places where cities and towns grew, at the same time coyotes have been spreading across the continent, perhaps more successfully than another mammal except humans. Ironically, in the past 20 years, we've witnessed a dramatic reversal of this encroachment process: coyotes are actually encroaching on our habitat, and they are doing so at an unprecedented rate. In the Denver metro area, predominately human habitat, we have created *safe, superior habitat* for coyotes. They aren't forced to live among us – they choose to live among us. Therefore, we (i.e., property owners, city administrators, wildlife professionals) should be dictating where and how coyotes live, not vice versa. We shouldn't have to be held captive in our own homes or backyards simply because coyotes have moved into our neighborhoods. CDOW policy should not consider urban pets simply "part of the food chain." At some point, we need to draw a line on the asphalt and warn coyotes that they are now entering "people country."

Our coyotes are “abnormal” – they attack!

This is the idea that coyotes attacking and killing pets, and being aggressive around people, are exhibiting “abnormal behavior.” A leading coyote expert in Colorado, Major Boddicker, argues that such behaviors are normal, i.e., coyotes are being coyotes and doing what coyotes naturally do (pers. commun., February 2009). Admittedly, we are seeing human-coyote conflicts in urban settings rise to unprecedented levels, and most are quite recent. To date, coyotes have attacked people in at least 19 states and 4 Canadian provinces (Timm and Baker 2007). And in October 2009, a second human fatality occurred, a 19-year-old female hiker in eastern Canada (Wilkinson 2009). However, I suggest that coyotes are simply being coyotes – highly adaptable, opportunistic, fairly large predators that exploit environments and assert their dominance in order to survive. That’s all they “know to do.” Apart from disease (e.g., rabies), their motivation to attack other creatures stems from hunger (i.e., predation), dominance (i.e., hierarchy), competition (i.e., territoriality), self-defense, etc. Coyotes explore and exploit whatever niche is available to them until something constrains them.

In Yellowstone National Park, that constraint is the re-introduction of wolves (*Canis lupus*). Where wolves are now present, coyote densities have dropped. While some wolves have attacked and killed coyotes, most of this change is behavioral: coyotes have learned to avoid wolves, but they remain present in good numbers in areas where wolves are scarce (Berger and Gese 2007). It took relatively few coyote deaths by wolves to condition remaining coyotes to lay low or move out of wolf areas. I hypothesize that coyotes in Denver don’t behave any differently than coyotes in Yellowstone. As successive generations of urban coyotes become more habituated to people, they will exploit that environment and assert their dominance until something (or someone) gives them good reason to be wary of humans.

Much of the behavior we see in urban coyotes today is not really new. Habituated coyotes were observed begging tourists for food in Yellowstone as early as 1947 (Young and Jackson 1951), and in *God’s Dog*, author Hope Ryden (1975) describes a Yellowstone coyote jumping into her car and refusing to leave. While coyote attacks on humans in Colorado and in several Eastern states are very recent, widespread and escalating, suburban coyote attacks on humans were first reported in southern California, with eight attacks documented between 1978 and 1981, including a fatal attack on a 3-year-old girl (Howell 1982). I maintain that the coyote behavior prompting these attacks is quite normal. Many people have suffered bites while trying to rescue their dogs from coyote attacks occurring either in their own yards or while walking dogs in their neighborhoods. A coyote likely views a dog on a leash as a rival canine intruder in the coyote’s territory, or as a threat to the coyotes’ nearby den of pups. In such situations, coyotes can be so focused on the pet that they ignore human presence; their urban experience is that humans routinely ignore them. Coyote hunters have known for decades that coyotes will respond aggressively to dogs, and they regularly use them to decoy coyotes at dens sites where

they can be shot (Rowley and Rowley 1987, Coolahan 1990). Joggers and trail bikers can prompt a prey chase response. There is evidence that coyotes can perceive small children as prey (Carbyn 1989, Timm et al. 2004). Similar behaviors, including attacks on people, have been seen in other canid species, including wolves and dingoes (Schmidt and Timm 2007). In all these instances coyotes are doing what coyotes do – behaving like coyotes. It’s normal.

Warning: Lethal Control – use only in an emergency!

It baffles me that some people strongly believe that people killing animals is always “bad”, and that human interaction/intervention with wildlife is “unnatural.” The fact is, we are here, too. Whether you believe in Divine creation or Darwinian evolution, humans are at the top of the food chain. As such, we have a great stewardship responsibility, but we are not subservient to wild animals, especially in urban settings (see Vantassel 2008).

Some of the familiar arguments against the effectiveness of lethal control include: 1) we’ve been killing coyotes in this country for 200 years, and now they are more numerous and widespread than ever before; 2) if you remove one coyote, another will simply take its place; and 3) killing coyotes in a given area actually increases the number of coyotes. The fact that coyotes are more numerous and widespread than ever before is certainly testimony to their great adaptability, resilience, and survivability. They are clever, opportunistic, tough, and prolific. However, that doesn’t mean lethal control efforts have been ineffective. There are many documented, successful control programs in both agricultural and urban settings, including some where very positive cost:benefit ratios have been calculated (Connolly 1982, Conover 2002:165, Baker 2007). In fact, I don’t think there’s any doubt that coyote populations were held in check and significantly suppressed in many areas of the west during the 1940s, ‘50s, and ‘60s, when government predator control programs to reduce livestock losses were well-funded and restrictions on toxicant use were minimal. The coyote control program in the Edwards Plateau region of Texas is a good example (Phillips and Nunley 1995). Arguably, the western sheep industry would have disappeared a long time ago if coyote control programs weren’t in place.

Does lethal control work in urban areas? Absolutely! The first well-documented urban coyote program was in Glendale, CA, in 1981 (Howell 1982, Baker 2007). Immediately after the fatal coyote attack on the 3-year old girl, a large-scale public education program (including warnings, hazing techniques, and a coyote hotline) was implemented, along with an intensive foothold trapping and shooting program. Within 80 days, 55 coyotes were removed from within half a mile of the child’s residence. The removal of the coyotes, coupled with the education program, dramatically reduced reports of pet attacks, and there were no further reports of coyote attacks on humans in Glendale for over 20 years.

In Griffith Park, within the city of Los Angeles, CA, 5 adults and 2 children were attacked by coyotes and injured during 1994-95. While implementing a public education program, a team of trained sharpshooters was

brought in. Five alpha adult and three young adult coyotes were quickly removed. There were no further attacks and coyotes appeared very wary of humans for over 10 years, even though coyotes were common in adjacent areas. In 1991 in northwest Laguna-Nigel, Orange County, CA, a pet walker was chased and his poodle ripped from his arms and killed. There were numerous other daylight pet attacks. Foothold traps were set and two coyotes were taken. There was no recurrence of bold coyote activity and only incidental cat losses for at least 6 or 7 years. Nearly identical scenarios of people being attacked were documented in southeast Laguna-Nigel in 1995, in the Forster Ranch area of San Clemente in 1992, 2001, and 2005), in south San Clemente and in San Juan Capistrano in 1997, and in Arcadia in 2004 (Baker 2007).

Rob Erickson, a colleague who operates a wildlife control business near Chicago and has worked closely with Stan Gehrt, research leader of the often-cited "Cook County, Illinois, Coyote Project" (Gehrt 2006, 2007), has probably trapped and shot more nuisance coyotes in the Chicago area than anyone else. Rob assures me that he has at least 30 to 40 documented cases in which he successfully stopped aggressive coyote behavior and attacks on pets with the use of foothold traps and shooting (R. Erickson, pers. commun., 2009).

My own experience bears this out, both in rural and urban situations. I've done coyote damage control trapping for Colorado ranchers for over 40 years, mostly on a preventive basis to accomplish local population reductions prior to calving or lambing. At most such sites, ranchers' losses to predators did not occur or were minimal. In the dozen or so instances where I had to go back and do follow-up or corrective control, the losses stopped. In cases when I was called in where no preemptive control had been done, I successfully removed the problem coyote and losses stopped. When preemptive coyote removal did not work, invariably it was because coyotes filled the void, moving in from adjacent high-population areas where control was not being done. In urban settings, I've used foothold traps, cable restraints, cage traps, and shooting to successfully remove problem coyotes. In each case, attacks on pets and aggressive behavior toward humans stopped. Lethal control works. And, I might add, I'm quite sure that not one coyote that I've removed has ever again attacked a dog, eaten a cat, or threatened a person!

Southern California coyote expert Rex Baker states from his experience that foothold trapping is the most effective tool in removing problem coyotes, stopping aggressive behavior, and re-instilling fear of humans (Baker and Timm 1998, Baker 2007). Shooting is an effective alternative in some situations. Baker and his colleagues state, "When coyote attacks on pets have begun to occur in an area, it is imperative that the problem be corrected by use of trapping, so as to prevent escalating human-coyote problems, including attacks on people" (Baker and Timm 1998:310).

As for using lethal control primarily as a last resort, it simply boils down to a question of whether you want to prevent attacks on pets and people, or not! Baker and his colleagues developed a list of increasingly troublesome

stages of coyote behavior, leading up to human safety risk (Timm et al. 2004, R. Baker pers. commun. 2010). These stages are often predictable and occur in this sequence:

1. An increase in observing coyotes on streets and in yards at night.
2. An increase in coyotes non-aggressively approaching adults and/or taking pets at night.
3. Early morning and late afternoon daylight observance of coyotes on streets and in parks and yards.
4. Daylight observance of coyotes chasing or taking pets.
5. Coyotes attacking and taking pets on leash or in close proximity to their owners; coyotes chasing joggers, bicyclists, and other adults.
6. Coyotes seen in and around children's play areas, school grounds, and parks in mid-day.
7. Coyotes acting aggressively toward adults during mid-day.

An obvious question to me is, "If lethal control (i.e., foothold traps and/or shooting) has been shown to be the most effective means to quickly stop coyote attacks on pets/people and the most effective means to re-instill fear of people in coyotes, why wait until half the neighborhood pets are killed, or some child is attacked, before implementing lethal control?" Unfortunately, most cities, agencies, and homeowner's associations wait until at least steps 4 or 5, or until a person is bitten, before initiating control actions. A notable exception is the city of Austin, TX, which has developed a city-wide coyote management response system using this scale of behavioral stages to define thresholds that, when reached, trigger coyote removal actions before a significant threat to human safety occurs (Farrar 2007). Of course, we in Colorado don't have much choice about when to use lethal control due to Amendment 14 and ordinances that prohibit discharge of firearms within city limits.

In regard to the objection to lethal control that states, "If you remove one coyote, another will simply take its place", I certainly recognize that this notion is fueled by observations of how quickly coyotes immigrate from surrounding areas to fill vacant territories. I've seen this firsthand, especially when the habitat factors that attract coyotes into neighborhoods have not been identified and changed. However, Baker has observed that lethal removal of problem coyotes can, in some cases predictably, cause the remaining coyotes to either leave the area or become much more wary of humans, a behavior that may persist for quite some time (Baker and Timm 1998).

A key question, then, is whether a newly-arrived replacement coyote's behavior will also be problematic. We know coyotes are highly intelligent and show individualistic behaviors. Research and experience tell us that not all coyotes in a given area kill livestock or attack pets; most don't. There is evidence that the alpha (i.e., dominant) adults in a given territory cause most of the sheep predation (Sacks et al. 1999). My experience suggests there is a parallel in urban areas, with alphas being the most likely coyotes to take pets or bite people. When we remove a problem coyote, the one taking its place is likely to be a younger, subordinate, less aggressive

animal, that is less likely (at least for some period of time) to create conflicts.

Certainly, localized coyote population reductions can also be very effective, especially when the dominant animals are removed in the process. The selective animal approach is obviously less effective in areas where coyote territories are small and densities are high. That's why it's so important to have a broad-scale, collaborative effort among adjoining communities in the Denver metro area. The bottom line is that lethal control can be very effective and should not be considered the last resort. But, coyote control is a lot like mowing your lawn – it's not a one-time fix. To be effective long-term it has to be repeated periodically, if not routinely, unless homeowners make a consistent effort to remove coyote attractants: food, harborage, and water sources, as well as alter their coyote-friendly behaviors.

Don't kill coyotes – you'll have more than before!

This notion that killing coyotes in a given area actually increases the number of coyotes, thereby making the problem worse, is becoming more prevalent in our society. The source usually cited as the basis for this belief is the publication "The Effects of Control on Coyote Populations" (Connolly and Longhurst 1975). These authors created a coyote population simulation model, based on real-world coyote reproduction and mortality data available at the time, that showed coyotes to be remarkably resilient survivors, able to withstand an annual removal of 70% of the population and still persist. In fact, the authors stated that if all control efforts "collectively do not reduce numbers annually on a continuing basis by at least 75%, no sustained decline in the population can be achieved... in most situations, killing coyotes at rates below 75% may merely stimulate reproduction and aggravate the problem" (Connolly and Longhurst 1975:27). Sounds like a losing battle to me!

However, in considering this source, it is critical to understand that any model is "a simplification of real phenomena and requires certain assumptions" (Connolly and Longhurst 1975:5). In a subsequent critique of this and three other coyote population simulation models, Connolly (1978:340-341) pointed out "...these assumptions are particularly important because the models exceed the bounds of available data". He adds, "...the missing information has been fabricated through the use of simplified assumptions which may be only generally correct. Thus, the models express the general relationship in numbers, which cannot be taken literally. The resulting output will appear in specific terms, but can be interpreted only generally."

In the case of this early coyote population model, all the authors were doing was looking at how changes in one variable (e.g., control kill of coyotes) could theoretically affect certain other variables (e.g., reproductive rates) in an otherwise constant, closed system, all other things being equal. Among those real-world factors that were assumed to be constant or equal, that in reality are not, are carrying capacity (including attractive neighborhood foods and resources that attract coyotes), emigration and immigration (dispersal) rates, parasites and diseases, and so on (see Connolly 1995:26-27).

Let me be quick to add, however, that this argument in no way is meant to disparage or devalue the important role that computer simulation models can and do play in scientific research, including wildlife management. Also, simulation models for coyotes and other wildlife management topics continue to improve and become more sophisticated (see Conner et al. 2008).

The bottom-line conclusion of Connolly and Longhurst was simply that "Killing coyotes unselectively with the techniques presently available, is not a very feasible means of reducing populations over broad geographical areas", and that "...better understanding of coyote population dynamics is required" (Connolly and Longhurst 1975:33). The main reason behind this conclusion was their model's prediction that coyote populations can withstand high levels of control, and can recover quickly when control is terminated (Connolly and Longhurst 1975:19, 23), the proverbial "rebound effect." However, there is not a "catapult effect", as some want to believe. In fact, Connolly himself maintains that those who use the paper to oppose coyote management (i.e., control) use it inappropriately and out of context. He recently told me that the statement, "killing coyotes at rates below 75% may merely stimulate reproduction and aggravate the problem," has "little or no relevance to selective removal of a few problem coyotes, and people who claim otherwise are just damaging their own credibility" (G. E. Connolly, pers. commun., April 2009). Besides, the whole argument is really a moot point, since no one intends to try to eradicate all the coyotes in the Denver metro area. For excellent further analysis of the findings and limitations related to coyote simulation models, see Wade (1981) and Connolly (1995).

Co-existing with our "coyote neighbors"

This point of contention begins with the recognition that coyotes are living among us in close proximity; they aren't likely to go away; and we don't necessarily want them all to go away. I certainly accept those realities.

"Coexisting with coyotes" (or "living with coyotes") conveys several messages. A good message is that, "We are aware of coyotes among us and we are actively addressing the situation" (i.e., doing something to mitigate potential problems). The "bad message" in my opinion, is that we will do so without harming them; we want "peaceful coexistence." Loosely translated, coexisting with coyotes = we don't want to kill them. Most advocates of coexistence openly oppose lethal control, except possibly as a last resort.

Part of the coexistence message is that coyotes should "feel welcome" in our neighborhoods, at least as long as they aren't causing any serious problems. Let's "live and let live!" Seemingly, the expectation is that if people are being responsible with their pets and doing nothing to habituate coyotes (e.g., provide food, water, and harborage for them), we'll all "live happily ever after." It's "Mother Nature," "Animal Planet" and the "Discovery Channel" right in our own backyards. Unfortunately, few, if any, neighborhoods are like that. More often than not, some pets are poorly managed and food sources (both human and natural) are readily available. Coyotes can move in and begin to habituate

before they are even noticed. When they are noticed, many people pay them little mind, others think they're really interesting, and few do anything to frighten the coyotes or hurt them.

By then, the neighborhood is well on its way to a coyote problem. Geist (2007) notes, "An animal that has become accustomed to people can turn from indifferent to aggressive at the drop of a hat." Also, habituation "...begins when a creature tolerates humans at a distance." One well-known coexisting with coyotes program even warns, "an indifferent attitude towards a coyote in your yard has a similar effect as feeding" (SPES 2007). At that point a proactive, aggressive coyote management plan needs to be implemented, or coyote behavior can quickly escalate through the 7 stages outlined above (Timm et al. 2004). If public opinion still favors a "let's try to coexist" emphasis, fine. Pull out all the stops and go for it: warnings, education, pet ordinance enforcement, no-feeding wildlife regulations, hotlines, hazing, etc. But by all means, allow an option for lethal control. In all likelihood, sooner than later you will need it.

The problem I have with this whole idea relates to the fact that people can and do shape coyote behavior. To some degree, we can train or condition urban coyotes to behave acceptably or unacceptably. A problem with the coexistence model is that we train coyotes to be comfortable around us. We do this by teaching people to be too tolerant of coyotes – to make them feel too welcome in our midst. At that point, coyotes are habituated.

Biological carrying capacity is the maximum wildlife population that a given area (or neighborhood) can sustain annually, based on the habitat's resources. "Cultural carrying capacity" is the maximum wildlife population that a neighborhood will accept or tolerate, e.g., the number of coyotes that can compatibly coexist with the local human population (see Conover 2002:358). Another term for this is 'social carrying capacity' or 'wildlife acceptance capacity' (see Webster 2007:473). The problem with the coexistence model is that it raises the cultural carrying capacity to dangerous levels. If coyote control is analogous to mowing your lawn, promoting coexistence is like fertilizing your lawn. *Advocating coexisting with coyotes fosters tolerance, which fosters habituation, which fosters aggression toward pets and people!* At some point, that becomes irresponsible, and in that sense it really is a people problem.

One way we do this is by understating the potential danger that coyotes pose in an urban environment, i.e., we make them seem harmless. For example:

- We downplay the fact that coyotes are true predators and carnivores. Instead, we describe them as "smallish, opportunistic omnivores". One lady at the CDOW symposium called them the "ultimate flexitarian."
- We compare the number of coyote attacks (on people) to the number of dog bites annually. Of course, the number of coyote attacks (15-20?) is infinitesimal compared to the 800,000 dog bites (e.g., in 1994) that require medical attention (see

Schmidt and Timm 2007:291). We fail to mention that roughly 70 million dogs live in our homes and back yards.

- We portray coyotes as "naturally timid," "fearful of man," "more afraid of you than you are of them." When they do attack people, it's always because people are intentionally feeding them.
- The CDOW defines a "nuisance coyote" very broadly compared to a "dangerous coyote." A dangerous coyote is rightly defined as one that has attacked a person or exhibits aggressive behavior towards a human and/or poses a significant threat to human safety. However, a coyote that is habituated, preying on pets or livestock, or menacing does not qualify as dangerous. It is just a "nuisance coyote." I hope that one doesn't come back to bite them!
- Another common practice is to state that there have been only so many attacks *over the past 100 years* (i.e., few attacks over a long period of time). The CDOW has been doing this for years at their "Living in Lion Country" talks. We do the same thing with coyotes and wolves. We fail to mention that nearly half the lion fatalities have occurred in the last 15 years, or that 65% of the coyote attacks outside CA since the early 1970s have occurred in the last decade (Timm and Baker 2007).

Another way we teach people to be too tolerant of coyotes is by extolling coyote virtues, making them look good. For example:

- We build empathy for them. We speak of coyotes as victims, forced to live among us. Or, "they were here first."
- We value them as predators of "vermin" like rats, mice, or too many rabbits (i.e., coyotes are beneficial).
- We value them as competitors or predators of red foxes, raccoons, skunks and feral cats, which prey on our songbirds or waterfowl (i.e., an important part of the natural ecosystem) (see Webster 2007:443).
- We anthropomorphize or humanize them. This is part of what some call the "Bambi Syndrome." (I still haven't forgiven Walt Disney for what he did to wildlife management in this country.)
- We value them as "watchable wildlife," our "wildlife neighbors."
- We tend to romanticize or glamorize the bigger predators. Certainly the wolf has become the classic poster child of American wildlife enthusiasts. We often refer to the coyote as "clever trickster," "song dog," or even "God's dog."

Let me interject here that few people have more respect, appreciation and admiration for coyotes than I do. I find them fun to watch, fascinating to study, and challenging to catch or hunt. And they certainly are an integral part of natural ecosystems. I like coyotes too!

The third way we do this is by overprotecting coyotes. We teach that lethal control is somehow a bad thing – at best, the last resort to solving coyote problems. For example:

1. As we've seen, we teach that lethal control doesn't work, that it only leads to more coyotes, even though situation after situation has proven otherwise
2. We teach that lethal control is harder to do than coexistence measures, and it is more expensive and unsafe for pets and people. Arguably, the opposite is true.
3. We over-protect coyotes when we get the priority or order of lethal vs. non-lethal backwards. Often lethal control can have great preemptive or preventive value when done early in the sequence of aggression.
4. We over-protect coyotes when we postpone or start lethal control too late. The time to start is when attacks on pets have begun (Baker and Timm 1998:310).
5. We teach people that lethal control is "bad," yet we condition coyotes to attack when we don't do lethal control. Commenting on escalating wolf attacks, Geist (2007) said, "a necessary condition for attacks to occur is the *de facto* or *de jure* protection of wolves." The same is true for coyotes.

The reality is that coexistence is happening – coyotes are living among us, and we are living among them. And whether we like it or not, it will continue. Therefore, a coexisting with coyotes program is very valid as part of a broader coyote management plan that includes a lethal control option. As I have said elsewhere (see Oleyar 2007:378), we in wildlife damage management should support an integrated approach to reducing human-wildlife conflicts, one that is firmly rooted in public education, prevention, and non-lethal control measures. However, we must recognize and educate people to the fact that peaceful coexistence is not the norm in nature. To expect coyotes and wolves to peacefully coexist with people is both naïve and unrealistic. Coyotes and wolves play by their rules, not ours. The key to their survival is to exploit their environment. That is all they know to do, and sooner or later it comes at the expense of people. There will always be a need for lethal control.

Yell and throw stuff – that'll scare 'em!

This is the perception that hazing/harassment is the most appropriate way to re-instill fear of people in coyotes. Much like the other issues I've addressed, this one would be better described as a misperception than an accurate one. I'll try to explain why. Hazing is rather broadly defined and loosely used, but generally is some action meant to instill or re-instill fear of people in coyotes. It generally falls under headings like: fear-provoking stimuli; negative stimuli; negative conditioning; or aversive conditioning. In essence, it's action meant to frighten coyotes and make them want to stay away from people or pets. At the most basic level, it involves simple things like scolding, yelling, waving arms, and acting aggressive or threatening towards coyotes. Another level might employ some sort of loud noise: air horns, firecrackers, whistles, or banging pans. It could include inanimate devices like all-night yard lights, motion sensitive lights or sprinklers, or strobe lights. At the highest level, it could include projectiles or

shooting to scare but not injure or kill, e.g., slingshots, paintball guns, low velocity airguns, etc. Harassing goes a step further and includes actually chasing the coyotes until they're out of sight. Again, the objective is to scare coyotes but not hurt them. Hopefully they will become frightened enough to keep a safe distance.

The problem with these techniques is that they rarely work, except in the very early stages of coyote exploration of the urban fringes, when coyotes are still a bit wary of humans. Why? Because by the time these techniques are employed, the coyotes are already well-habituated. It's generally too late. That's certainly the case in the Denver metro area. Timm et al. (2004) stated, "Once coyotes have begun acting boldly or aggressively around humans, it is unlikely that any attempts at hazing can be applied with sufficient consistency or intensity to reverse coyote habituation." Schmidt and Timm (2007:17) add, "We believe that there are some problem coyotes whose habituated and/or aggressive behavior cannot be reversed with any feasible or practical methods..." Think about it: urban coyotes have already adapted to bumper-to-bumper traffic, honking horns, wailing sirens, flashing lights, people everywhere, yelling kids, barking dogs, etc. What's a little scolding and arm waving supposed to add to all that? I'm reminded of Fort Carson, a large army installation in Colorado Springs. I'm well aware when maneuvers are underway: the sky is lit up with exploding flares, howitzers are booming, the rat-tat-tat of machine guns is incessant, and the rumble of tanks is very discernable. Yet, the place abounds with coyotes – habituated coyotes.

Conover (2002:236-238) says, "The main problem with most fear-provoking stimuli is that animals soon learn that they pose no real threat and then ignore them. Habituation is the main factor that limits the effectiveness of fear-provoking stimuli as a method to resolve human-wildlife conflicts." He goes on to say, "The more animals are exposed to a fear-provoking stimuli, the faster they will habituate to it". Baker (2007:390) found that in Stage 3 and beyond of his scale of progressive aggressive coyote behaviors, "any changes in coyote behavior due to hazing was usually temporary..." The logical time to implement hazing is after lethal action has been taken, when coyotes have learned they have something to fear, or early in Stages 1 and 2.

But there are other problems as well. For instance, the amount of effort required for hazing to be effective is more than most communities are willing or able to provide. Schmidt and Timm (2007:297) state, "If the *majority* of residents would undertake hazing efforts . . . it is possible that some degree of wariness toward humans could be maintained" (emphasis mine). However, they preface that statement by saying it would take a *community-wide effort when these animals first become visible*. And they go on to add, "We recognize that coyotes will habituate to these non-injurious actions..." Getting that kind of effort is difficult to do, especially before coyotes have become a threat to pets or people.

The Vancouver B.C. "Co-existing with Coyotes" program (see Worcester and Boelens 2007:396) claims they have consistent success using non-lethal deterrents when their staff coyote response teams *aggressively and*

loudly physically chase observed coyotes out of a neighborhood. They note that, "The importance and level of the volume and hostility used cannot be overemphasized... *The coyote is pursued as long as its whereabouts are known*" (emphasis mine). Even then the staff tries to locate it and repeat the process. They will do this time and again if necessary. However, they still monitor for potential removal (i.e., lethal control) as the case requires. Addressing the role of harassment, Conover (2002:241) noted that "When an animal is consistently chased away from a site, it will stop returning to that site..." (emphasis mine). It takes intense, persistent effort from a lot of people to work. Part of the difficulty is that not everyone in a community supports even non-lethal coyote control. Some like or respect coyotes and will continue to provide sanctuary on their properties, treat coyotes kindly, and even feed them. At best, the coyotes get mixed signals and learn to adapt to hazing efforts.

I suggest that coyotes, like bears (see McCullough 1982), need to perceive humans as life-threatening or at least a source of pain before they will learn to respect (i.e., fear) humans. Until then, they will continue to explore and exploit their environment. A quote from a James Thurber by Conover (2002:229) says it well, "You can fool too many of the people too much of the time. But unfortunately, animals are a lot smarter." The irony here is amusing: we try to deceive coyotes into believing we are dangerous by hazing them, but all we accomplish is deceiving people into believing that hazing works.

Hazing usually works only when accompanied by some level of lethal control. This should be evident from our review of successful coyote management programs in California and elsewhere. Again, Baker (2007:390) observed that, "in stages 3 and beyond, any changes... due to hazing was usually temporary... *unless one or more coyotes was trapped or shot.*" (emphasis mine). Conover (2002:226-232) punctuates the point by stating, "Unless the fear-provoking stimuli are actually capable of killing animals, habituation is inevitable...." Relying on hazing alone can even exacerbate the problem. Baker (2007) went so far as to say that removal of one or two coyotes may not be enough when communities wait until coyotes are too habituated. "When it comes to re-instilling fear of people in coyotes, perhaps the old physical fitness maxim says it best, "No pain, no gain."

It's not the coyote's fault – it's a "people problem!"

This is the claim that what we really have is a people problem, not a coyote problem. There is certainly a lot of truth to this claim, but not necessarily in the way implied. This one goes both ways. What is meant is that the problem is mostly the fault of people, not the coyotes. People are portrayed as the bad guys. Coyotes are portrayed mostly as innocent victims in all this (i.e., coyotes just being coyotes in a man-altered environment). Some of the arguments we hear the most are that coyotes were here first, people are irresponsible with their garbage and pets, and people are intentionally feeding coyotes. Of course, all these things are true to a degree, and they contribute to the problem. But the real problem is habituated, aggressive coyotes attacking pets and

people. Pets and people are the victims. The insinuation behind the claim that we have a people problem is that if people would simply be more responsible, we wouldn't have a coyote problem. Some would go so far as to insist that we completely coyote-proof our yards/dog runs, cease to jog or walk the dog on public trails, and never let our children out of our sight. I don't buy it. However, I do concur that we have a people problem in a different sense. I suggest that those who most exacerbate the problem are both the people who intentionally feed coyotes *and those who promote coexistence without lethal control*. Those who don't want to hurt coyotes are the real people problem.

A contributing factor in all this is the great weight that agencies like the CDOW put on public opinion (i.e., human dimensions). Over-reliance on public opinion polls, which are largely driven by sentiment (i.e., emotion) and media bias (i.e., sensationalism), rather than reality (i.e., reason), skews wildlife policy decisions. In an effort to please the public, agencies often abdicate responsible actions in favor of passive platitudes. The whole idea of human dimensions, in turn, quickly transitions into politics. That's a people problem. If it weren't for sentiment toward coyotes and the influence of politics, we could solve the coyote problem.

Does the practical reality of human development (i.e., landscaped neighborhoods, playgrounds, parks and open space, golf courses, etc.) cause a coyote problem? Or, do coyotes moving into such areas cause the problem? Interestingly, the Federal requirement that Colorado Front Range developers set aside critical habitat (i.e., riparian corridors) for the "endangered" Preble's meadow jumping mouse (*Zapus hudsonius preblei*) adds an ironic twist to this question. Habitat that favors the mouse greatly favors coyotes, too! What about the fact that some of the highest densities and smallest home ranges of coyotes ever reported are found in suburban areas (Shargo 1988, Gehrt 2007). Is that a people problem or a coyote problem?

It's generally agreed among coyote experts that prior to European colonization of North America, coyotes were native primarily west of the Mississippi. Now that coyotes have greatly expanded their range to include all 48 contiguous states, does that not make them an "invasive species" east of the Mississippi? Stan Gehrt (pers. comm., 2009) says that coyotes first started showing up in remote, wooded areas in the Chicago area in the 1970s. Now, there are more than 2,000 throughout that metro area. Is that a people problem or a coyote problem? The coyotes were not there first. I'd argue that what we have is really a coyote problem compounded by people. But to whatever extent it's a people problem, it's due largely to people opposing or not utilizing lethal control.

CONCLUDING THOUGHTS

It should be apparent from this discussion that a lot of misconceptions and misinformation surround the debate over how to best manage urban coyotes. I've demonstrated how this misinformation actually fosters human-coyote conflict rather than mitigating it. My comments are meant to challenge some of the prevalent

thinking and expose a few flaws in what some people believe or perceive. Hopefully, I've created a more balanced and accurate understanding of what is involved, and perhaps placed a little more responsibility where it rightfully belongs. It should also be very clear that I believe strongly in the role of lethal control. I've made the case for it. I don't believe we can effectively manage wildlife without it.

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