

The Problematic Trend of Pseudo-Science Dictating Urban Coyote Management Policy

Sean A. Brady

Attorney, Michel & Associates, P.C., Long Beach, California

ABSTRACT: Interest groups are lobbying local authorities nationwide to manage the increasingly dangerous problem of nuisance urban-coyotes by adopting a so-called “hazing” regime, whereby the populace is educated to actively engage coyotes with hostile actions, such as yelling and throwing objects at them. While there is some scientific basis for including an organized hazing regime as *one* component of a comprehensive urban-coyote management plan, these interest groups have been successful in convincing many local authorities that a public hazing regime is, aside from removing attractants, the *only* acceptable approach for addressing aggressive or habituated coyotes and that any lethal measures are not only inhumane but ineffective, *as a matter of science*. However, there is no mainstream scientific literature that supports their view. To the contrary, the only scientific literature on the subject casts doubt on the efficacy of hazing, at least as a long-term solution. Nevertheless, many municipalities have accepted these objectively biased groups’ representations as scientifically valid with little question and have adopted coyote policies based on such representations, without the usual hyper concern for public safety and liability that municipalities are famous for. This paper puts the urban-coyote management plans pushed by interest groups, like the Humane Society of the United States and Project Coyote, under the microscope to evaluate their scientific pedigree to show how widespread their campaign of misinformation reaches.

KEY WORDS: California, coyote, hazing, human safety, Humane Society of the United States (HSUS), liability, municipalities, Project Coyote, urban coyote

Proc. 27th Vertebr. Pest Conf. (R. M. Timm and R. A. Baldwin, Eds.)
Published at Univ. of Calif., Davis. 2016. Pp. 112-116.

INTRODUCTION

By all accounts, the problem with nuisance urban-coyotes is both widespread and increasing. There were 24 recorded coyote bites of people in Southern California alone in 2015, an almost two-fold increase from 2001, which was the highest year between 1973 and 2003 (Littlejohn 2016). And so far during 2016, the attacks do not seem to be abating. A recent spate of coyote attacks on pets, children, and adults, including three attacks on adults in Montebello, CA (Evans 2016) and one on a three-year-old girl in Irvine, CA who was accompanied by adults at the time, shows how serious, even deadly, this threat is and continues to be (Casiano 2015, Schwebke 2015).

In the face of this problem, “animal rights” interest groups like the Humane Society of the United States (HSUS) and Project Coyote are exacerbating the urban-coyote problem by relentlessly lobbying local municipalities to adopt a number of scientifically unsound urban-coyote management plans, like their so-called “hazing” regime. In reality, what is being pushed is little more than these groups’ propaganda. They masquerade their regime as a legitimate solution grounded in science or supported by legitimate experts in the field of wildlife biology. But, many of the claims made by these interest groups are neither. For example, they cannot pinpoint *any* science supporting hazing as a viable, long-term solution to managing nuisance urban-coyotes. Real experts on coyote behavior have concluded, in peer reviewed scientific papers, that it is not. And, this is setting aside that hazing is likely illegal in many instances.

While all municipalities should be coming to the realization that these predators pose a significant threat to the safety of their residents, for which they may be liable,

many of them are choosing to blindly follow the HSUS-sponsored protocol, refusing to even engage established experts in the field of coyote management or any dissenting voice. This phenomenon suggests that municipalities are, for some reason, being swayed by something other than their traditional concerns. Such an odd response to this issue raises a red flag that should be concerning to residents in affected areas, which are growing every day, and that is deserving of scrutiny. This paper does just that.

THE UNNATURAL URBAN COYOTE

Some people understandably resist supporting the removal of urban-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 but. Studies suggest that there is very little that is natural about nuisance urban-coyotes. In the rural environment, coyotes and other predators have a limited food source. However, in the urban or suburban environment that coyotes have infiltrated as their numbers in the wild overflow, there is an easy-to-obtain and reliable food source in the form of trash and domestic pets (Gehrt et al. 2011); thus, their populations increase and their territories expand. Additionally, the urban-coyote’s lifespan is artificially high compared to its rural counterpart, and an urban-coyote’s pups’ survival rate is five times higher than rural coyote pups (Gehrt et al. 2011).

Nor is the coyote’s behavior in urban areas natural because it has adapted to its artificial environment. They roam populated areas seemingly unaffected by human presence, approaching people and even entering homes

(Andrews 2013, Dobruck 2015, Mellen 2015). In one such instance, a coyote even entered a Laguna Beach home, grabbed the family's dog out of a room in which there was a one-week-old baby, and ran out (Dobruck 2015). This is not their ordinary behavior, according to the experts. "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. . . ." (Schmidt and Timm 2007). The scientific literature does not seem to have any precedent for coyotes acting as emboldened as the ones currently roaming municipalities all over the country.

THE "HAZING" METHOD PROPOSED BY ANIMAL RIGHTS SPECIAL INTEREST GROUPS

HSUS and Project Coyote promote hazing as a superior alternative method to trapping for dealing with problematic urban-coyotes (HSUS 2015b, Allen 2012). According to HSUS, "Hazing is a method that uses deterrents to move an animal out of an area or discourages an undesirable behavior or activity. Hazing can help maintain coyotes' fear of humans and deter them from neighborhood spaces such as backyards and playgrounds" (HSUS 2015b).

Some cities have adopted this approach after being misled to believe it is the prevailing conventional wisdom on how to deal with nuisance coyotes. It is not. To the contrary, the foremost experts in the field of coyote behavior and management have generally dismissed hazing as an untenable solution for the sort of coyote problems plaguing urban areas throughout 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" (Oleyar 2010). Professor Rex Baker, one of the foremost experts on urban coyotes, has also explained, "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" (Baker 2007, Timm et al. 2004). In a recent interview, Dr. Robert Timm noted, "When they start to become pretty bold around humans . . . if you don't start thinking about removing a few animals selectively, I am not sure what else reverses the behavior at that time" (Mehlinger 2015). Similarly, the peer-reviewed University of California Extension guide on management of coyotes (Timm et al. 2007), states, "Once coyotes have lost their fear of humans or have started behaving aggressively, a health and safety hazard exists. Usually it can be remedied only by removal of one or more of the coyotes . . . Management experience has shown that removal of only a few problem coyotes from a population will re-instill fear of humans in the remaining population, often solving coyote problems in that locality for months or even years." Similarly, researchers working in the Denver, CO suburban environment have concluded, "Hazing problem individuals can have short term benefits that enable people to escape dangerous situations . . . but there is no evidence showing hazing will change problem behavior over the long-term . . . Non-lethal methods should be used to prevent the development of problem individuals, not to correct the behavior of individuals that have already developed the behavior" (Breck et al. 2016, Bonnell and Breck

2016).

These expert researchers have also unequivocally found that coyote and certain other predator populations must be actively managed by humans to avoid predator species becoming brazen and threatening to humans. Timm and his colleagues note that concurrent with selective removal of a few problem coyotes, it is necessary to reduce sources of food, water, and shelter in suburban environments to make them less attractive to coyotes, thereby reducing the chance that additional coyotes will become habituated to living too close to people (Timm et al. 2007, Orange County Register Editorial 2015). Baker has explained that, "when coyote attacks on pets have begun to occur in an area, it is imperative that the problem be corrected by trapping, so as to prevent escalating human-coyote problems, including attacks on people" (Baker and Timm 1998). In sum, the experts do not promote hazing as a sole alternative to selective lethal removal for managing the urban coyote problem.

Additionally, some aspects of the proposed hazing regime appear to be illegal in many jurisdictions. One such example is California law, which 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 (Cal. Code Regs. tit. 14, § 251.1). With few and limited exceptions, harassment of wildlife is a criminal misdemeanor (Cal. Fish & Game Code § 12000). The popular methods of hazing advocated by HSUS and Project Coyote, which include chasing and throwing things at coyotes when merely seen in an urban area, likely fit the definition of "harassing."

THE "CATAPULT EFFECT" – COYOTE REMOVAL RESULTS IN MORE COYOTES – IS UNSUBSTANTIATED

HSUS insists that hazing is the only option for proper coyote management based on the assertion that removal efforts do not reduce populations long-term but instead lead to even more coyotes. HSUS convinces municipal officials to accept this so-called "catapult effect" by circulating an official appearing infographic purporting to prove such (HSUS 2015c). Tellingly, HSUS does not cite any scientific study or source as supporting its theory. For good reason, when Dr. Eric Gese (of the USDA National Wildlife Research Center) was asked for comment on HSUS's infographic, his reply was it is "over simplified and unproven" (Project Coyote Lies, Undated).

It appears that HSUS may be basing its infographic on an early coyote population model by Connolly and Longhurst (1975). But, as at least one expert in the field of coyote management has pointed out, that study does not stand for the proposition HSUS purports it does:

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 (Oleyar 2010:293).

In sum, the Connolly and Longhurst model merely indicated that coyote populations can withstand high levels of control and rebound quickly after control is terminated. But this does not mean that removal of problematic coyotes will stimulate reproduction or aggravate problems (Oleyar 2010). Note that the Connolly and Longhurst study assumed no alteration of resources used by coyotes in the environment (food, water, and shelter).

Indeed, even some studies that advocate for non-lethal management methods concede lethal take may be necessary for problem coyotes (Mitchell 2010). Despite there being no scientific support for its claims of a "catapult effect" by removing problematic coyotes – and only criticism thus far from the scientific community – HSUS has nevertheless continued to achieve its acceptance by municipal officials who pass the information on to their constituents as fact. It is a classic case of repeat a claim enough times and people will believe it, regardless of its veracity.

THE TRUE AGENDA BEHIND "HAZING"

HSUS and Project Coyote do not just claim that, as "animal rights" organizations, their approach is a preference; rather, they have been representing themselves as the authority on appropriate coyote management measures with science on their side. 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.

They cover-up the realities of nuisance urban coyotes and the genuine threat they pose to pets and humans to protect these predators, so that they proliferate and reduce game herds to make hunting unsustainable. That is their end game. The CEO of HSUS, Wayne Pacelle, has publicly stated: "We are going to take 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" (Humane Watch 2014a).

To that end, HSUS has recently proposed to the California Fish and Game Commission that coyotes should only be allowed to be taken if a near-impossible-to-get permit is first issued (Fish and Game Commission 2013). This would eliminate general coyote depredation efforts

that have been part of an overall nuisance-animal management process proven successful at keeping coyotes (and other dangerous predators) from disrupting farming and ranching, and has largely 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 (see Geist et al. 2000) with an unbalanced and unproven "rewilding" approach that allows predators like wolves, black bears, grizzly bears, mountain lions, coyotes, and other predator species to overpopulate and expand their territories with the aim of ending man's hunting of those predators' food supply (Foreman 2004).

In a nutshell, radical animal rights groups like HSUS are pursuing a special agenda in place of valid regulation and balanced wildlife management science. In that pursuit, they are trying to hoodwink municipalities into believing they are the experts on the urban-coyote problem that they are not. However, HSUS should not be confused with local humane societies. HSUS is a multimillion-dollar national fund-raising company that operates no local animal shelters and exploits the sympathetic positions of animals for economic gain, whereas local humane societies are small, independent, non-profit entities that focus on rescuing and housing animals for the purpose of caring for animals and finding them homes.

MUNICIPALITIES ARE IGNORING THE RISKS ASSOCIATED WITH A "HAZING" ONLY POLICY

Hazing is impractical and generally ineffective, according to those with the highest credentials in the field. Their view is corroborated by the facts that under HSUS's and Project Coyote's recommended hazing policy, the urban-coyote populations have continued to soar, while these coyotes have become more aggressive and more successful in places they were rarely seen previously (Andrews 2013). Public officials should be very concerned about this phenomenon, because "habituated animals, those who have developed a psychological patience with our presence, are potentially much more dangerous than non-habituated or 'wild' animals. . ." (Geist 2007).

If they are concerned, though, they do not appear to be. Rather than warning their constituents that these urban coyotes are potentially dangerous and should be avoided, municipal officials are, by adopting HSUS's hazing regime, instead encouraging untrained people to approach these predators, make noise, and throw things at them so that they feel unwelcomed! Not only does this practice potentially create liability for the encouraging municipality if someone doing the suggested "hazing" get hurt, but it may be in many instances illegal harassment of wildlife (See e.g., Cal. Code Regs. tit. 14, § 251.1, Cal. Fish & Game Code § 12000).

HSUS's "hazing method" also ignores impacts on threatened or endangered species that coyotes may feed on. For example, coyotes have been known to prey on the California least tern (*Sterna antillarum browni*), snowy plover (*Charadrius nivosus*), and California brown pelican (*Pelecanus occidentalis californicus*) (USFWS 2006).

Despite all of the reasons to be skeptical of the HSUS promoted urban-coyote management plan, city after city has adopted some version of it, even when confronted with these points about its risks and dangers. These municipalities are simply ignoring the problems and risks associated with the Humane Society's hazing model. This approach is rather unusual for cities, which generally are extremely risk averse and cautious about accepting advice on forming public policy from biased interest groups, especially groups like HSUS with various ethical scandals (HumaneWatch 2013, HumaneWatch 2014b).

This uncharacteristic behavior by municipalities in ignoring public safety and potential financial liability in adopting these radical policies is difficult to explain. But, circumstantial evidence suggests that their reasoning is driven mostly by fear of these interest groups. Such groups hold a Damocles sword of threatened litigation over the heads of municipalities, suing government agencies on a regular basis with their war chests of hundreds of millions of dollars. (Humane Watch 2011, HSUS 2015a).

For example, animal rights groups recently sued the Counties of Monterey and Mendocino, California, over those counties' decision to contract federal authorities to remove problematic coyotes, alleging that the counties were required to and failed to conduct an environmental analysis of the impact of removing them (Center for Biological Diversity 2016). This type of litigation threat discourages municipalities from considering their constituents' needs, as officials, somewhat understandably, become too concerned with the purse.

While this is admittedly speculation, there is little else that explains why municipalities blindly follow the HSUS directive, even when faced with the information set forth in this paper. Multiple municipalities have been provided this information, but have nevertheless opted to side with HSUS. That alone would not be so troubling, if those municipalities actually weighed both sides and genuinely concluded that HSUS is correct. But, in almost every instance, the municipality has refused to engage the opposing view, wholly ignoring it instead. If they were truly concerned with developing sound policy, they would be engaging all sides, especially the one that is concerned about human victims, not some special interest, and that bases its position on the works of experts in the field. But, experts who support urban coyote management, which includes the option of selective lethal control, have been cast aside and ignored by many municipalities despite their comprehensive works on the subject. That should sound alarm bells for any unbiased spectator.

CONCLUSION

Nothing in this paper 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. Nor does the author purport to be an expert on what proper management should be, as he is not an expert on the subject of coyote management. But, "coexist" does not mean tolerating coyotes eating pets, attacking children, and besieging peoples' homes and streets so residents are

afraid to take a walk in their own neighborhoods. The point of this paper is to shed light on the fact that municipalities are not only formulating their coyote management policies on the advice of biased, radical interest groups that have no ties to their areas other than a desire to protect the coyotes therein at all costs, human or otherwise, but are doing so without consulting knowledgeable experts in urban coyote management, and uncharacteristically ignoring the potential serious public safety risks and associated liability. The public should be aware of this dynamic and be concerned.

LITERATURE CITED

- Allan, E. 2012. Coyote hazing team to be deployed. Boston.com news article, Website, Oct. 28, 2012, Boston Globe Media Partners, Boston, MA. <http://archive.boston.com/news/local/massachusetts/2012/10/27/coyote-hazing-team-deployed-belmont-town-use-scare-tactics-coyotes-belmont-use-scare-tactics-coyotes/jyyDrGfm8bnu5JlhjJPYL/story.html>
- Andrews, C.G. 2013. Urban animals: wildlife is adapting to city life. Good Nature Travel: The Official Travel Blog of Natural Habitat Adventures & WFF. <http://goodnature.nathab.com/urban-animals-wildlife-is-adapting-to-city-life/>
- Baker, R. O. 2007. A review of successful urban coyote management programs implemented to prevent or reduce attacks on humans and pets in Southern California. Proc. Wildl. Damage Manage. Conf. 12:382-392
- Baker, R. O., and R. M. Timm. 1998. Management and conflicts between urban coyotes and humans in Southern California. Proc. Vertebr. Pest Conf. 18:299-312.
- Bonnell, M. A., and S. W. Breck. 2016. Using coyote hazing at the community level to change coyote behavior and reduce human-coyote conflict in urban environments. Proc. Vertebr. Pest Conf. 27:97-102.
- Breck, S. W., S. Poessel, and M. A. Bonnell. 2016. Evaluating lethal and no-lethal management options for urban coyotes. Proc. Vertebr. Pest Conf. 27:103-111.
- California Code of Regulations. Title 14, section 251.1. Harassment of animals.
- California Fish and Game Code. Section 12000.
- Casiano Jr., L. 2015. Man and 3-year-old son bitten by coyote in Irvine. Orange County Register news article, Oct. 15, 2015, Santa Ana, CA. <http://www.ocregister.com/articles/bitten-687640-year-coyote.html>
- Center for Biological Diversity. 2016. Lawsuit challenges Monterey County's contract with federal wildlife-killing program. Press Release, Center for Biological Diversity, Tucson, AZ. https://www.biologicaldiversity.org/news/press_releases/2016/wildlife-services-06-02-2016.html
- Connolly, G.E., and W.M. Longhurst. 1975. The effects of control on coyote populations. Bull. 1872, Div. of Ag. Sciences, Univ. of Calif. 37 pp.
- Dobruck, J. 2015. Coyote enters Laguna Beach home and snatches pet chihuahua, owners say. Los Angeles Times news article, Local/L.A. Now, Nov. 28, 2015, Los Angeles, CA. <http://www.latimes.com/local/lanow/la-me-ln-coyote-enters-laguna-home-snatches-pet-chihuahua-20151128-story.html>

- Evans, E. 2016. Coyote attacks force closure of Montebello park: 'People are not food for coyotes'. Los Angeles Times news article, Local/L.A. Now, Aug. 9, 2016, Los Angeles, CA. <http://www.latimes.com/local/lanow/la-me-ln-coyote-attacks-20160809-snap-story.html>
- Fish and Game Commission. 2013. Predatory policy review. Worksheet, California Fish & Game Commission, Sacramento, CA. Dec. 5, 2013. http://www.fgc.ca.gov/meetings/2014/jan/Predator_Policy_Worksheet.pdf
- Foreman, D. 2004. Rewilding North America: A Vision for Conservation in the 21st Century. Island Press, Washington, D.C. 312 pp.
- Gehrt, S. D., J. L. Brown, and C. Anchor. 2011. Is the urban coyote a misanthropic synanthrope? The case from Chicago. *Cities and the Environment* (4)1:14.
- Geist, V. 2007. How close is too close? Wildlife professionals grapple with habituating wildlife. *The Wildl. Profess.* 1:34-37.
- Geist, V., S. P. Mahoney, and J. F. Organ. 2000. Why hunting has defined the North American model of wildlife conservation. *Trans. No. Amer. Wildl. Nat. Res. Conf.* 66: 175-185.
- HSUS. 2015a. Annual Reports and Financial Information. Website. Humane Society of the United States, Washington, D.C. http://www.humanesociety.org/about/overview/annual_reports_financial_statements.html?referrer=https://www.google.com/
- HSUS. 2015b. Coyote hazing guidelines: how to haze for effective reshaping of coyote behavior. Humane Society of the United States, Washington, D.C. 2 pp. http://www.humanesociety.org/assets/pdfs/wild_neighbors/coyote_hazing.pdf
- HSUS. 2015c. Why killing coyotes doesn't work. Website. Humane Society of the United States, Washington, D.C. http://www.humanesociety.org/animals/coyotes/tips/against_killing_coyotes.html
- HumaneWatch. 2011. The Humane Society of the United States and pet shelter giving. Website. HumaneWatch, Washington, D.C. https://www.humanewatch.org/the_humane_society_of_the_united_states_and_pet_shelter_giving/
- HumaneWatch. 2013. Unpacking the HSUS gravy train (2013 edition). Website. Dec. 4, 2013. HumaneWatch, Washington, D.C. <https://www.humanewatch.org/unpacking-the-hsus-gravy-train-2013-edition/>
- HumaneWatch. 2014a. Creeping HSUS kudzu in California. Website. Feb. 10, 2014. HumaneWatch, Washington, D.C. <https://www.humanewatch.org/creeping-hsus-kudzu-in-california/>
- HumaneWatch. 2014b. HSUS has quietly sent \$26 million to the Caribbean. Website. Mar. 19, 2014. HumaneWatch, Washington, D.C. <https://www.humanewatch.org/hsus-has-quietly-sent-26-million-to-the-caribbean/>
- Littlejohn, D. 2016. What experts are doing about the increasing number of coyote attacks on humans in LA County. *The Daily Breeze – Wildlife*, News article, Aug. 14, 2016. Digital First Media, Denver, CO. <http://www.dailybreeze.com/environment-and-nature/20160814/what-experts-are-doing-about-the-increasing-number-of-coyote-attacks-on-humans-in-la-county>
- Mehlinger, S. 2015. Management of urban coyotes complicated by unpredictability, lack of data and emotional politics. News article, Long Beach Business Journal, Dec. 7, 2015, Long Beach, CA. <http://www.lbbizjournal.com/single-post/2015/12/07/Management-Of-Urban-Coyotes-Complicated-By-Unpredictability-Lack-Of-Data-And-Emotional-Politics>
- Mellen, G. 2015. Coyotes are in Huntington Beach's crosshairs in new, tougher plan. News article, Orange County Register, Dec. 22, 2015, Santa Ana, CA. <http://www.ocregister.com/articles/coyotes-697075-plan-coyote.html>
- Mitchell, N. 2010. Best management practices for coexistence with coyotes on Aquidneck and Conanicut Islands. Jan. 5, 2010. The Conservation Agency, Jamestown, RI. <http://theconservationagency.org/wp-content/uploads/Best-Management-Practices-for-Coexistence-with-and-Management-of-Coyotes-current-vers.pdf>
- Oleyar, C. M. 2010. How misinformation fosters urban human-coyote conflicts. *Proc. Vertebr. Pest Conf.* 24:290-297.
- Orange County Register. 2015. Encroaching coyotes can't be ignored. Editorial, Orange County Register, Dec. 7, 2015, Santa Ana, CA. <http://www.ocregister.com/articles/coyotes-694894-coyote-beach.html>
- Project Coyote Lies. Undated. Coyote coexistence. Website. <https://www.projectcoyotelies.com/coyote-coexistence.html>
- Schmidt, R. H., and R. M. Timm. 2007. Bad dogs: why do coyotes and other canids become unruly? *Proc. Wildl. Damage Manage. Conf.* 12:287-302.
- Schwebke, S. 2015. Irvine on alert amid coyote attacks on children. News article, Orange County Register, Santa Ana, CA, July 8, 2015. <http://www.ocregister.com/articles/coyote-670945-keep-wildlife.html>
- Timm, R. M., R. O. Baker, J. R. Bennett, and C. C. Coolahan. 2004. Coyote attacks: an increasing suburban problem. *Trans. No. Amer. Wildl. Nat. Res. Conf.* 69:67-88.
- Timm, R. M., C. C. Coolahan, R. O. Baker, and S. F. Beckerman. 2007. Coyotes. *Pest Notes*, Publication 74135, Univ. of Calif. Division Agric. and Nat. Resources. 7 pp.
- USFWS (U.S. Fish & Wildlife Service). 2006. Final Predator Management Plan, San Diego Bay National Wildlife Refuge (Sweetwater Marsh and South San Diego Bay Units). Appendix M., Final Comprehensive Conservation Planning and Environmental Impact Statement. U.S. Fish and Wildlife Service. 18 pp. https://www.fws.gov/refuge/San_Diego_Bay/what_we_do/planning.htm