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## MISSING CATS, STRAY COYOTES: ONE CITIZEN'S PERSPECTIVE

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# Missing Cats, Stray Coyotes: One Citizen's Perspective\*

Judith C. Webster, Vancouver, British Columbia, Canada

**Abstract:** The author explores the issue of urban coyotes and coyote management from a cat owner's perspective, with specific examples from Vancouver, B.C., Canada. Following a personal encounter with two coyotes in July 2005 that led to the death of a cat, the author has delved into the history of Vancouver's "Co-existing with Coyotes", a government-funded program run by a non-profit ecological society. The policy's roots in conservation biology, the environmental movement, and the human dimensions branch of wildlife management are documented. The author contends that "Co-existing with Coyotes" puts people and pets at greater risk of attack by its inadequate response to habituated coyotes, and by an educational component that misrepresents real dangers and offers unworkable advice. The environmental impact of domestic cats is addressed. The author makes the case that generalized opinions about the negative effects of cats on songbird populations and other wildlife, and assertions that urban coyotes are beneficial, are unsupported by objective experimental data. When environmentalists, who predominantly hold these views, also research, promote, and oversee urban wildlife policy, there is a consequent lack of interest in restricting coyote populations in cities, along with little concern for the fate of outdoor cats and even a desire for their depredation.

**Key Words:** Canada, *Canis latrans*, cats, Co-existing with Coyotes, conservation biology, coyotes, deep ecology, *Felis catus*, human dimensions, pets, predation, Stanley Park Ecology Society, urban wildlife, Vancouver B.C.

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## A COYOTE NUISANCE REPORT, VANCOUVER, B.C.

I intervened in an attack by two coyotes on a 22-pound cat. At 1:07 a.m. on July 1, 2005, I was alerted that something was very wrong by one of my three outdoor cats crashing through the cat door. I jumped up and looked out the kitchen window. Under the sickly yellow light from the street-lamp across the road, I saw the coyotes standing together. One had a cat by the neck, limp as a rag doll, shaking it back and forth. Its body rippled as though the skin was being detached from the underlying tissue. It was either Neutron or Donovan.

My brain virtually short-circuited. Seconds seemed like hours. I exploded out the back door and side gate onto the street, barely dressed, and unarmed. I ran at the coyotes. They looked like young adults, with salt and pepper coats, German shepherd-sized but longer-legged. They were startled and dropped the cat. I charged down the street after them, but my top speed under ideal circumstances is 9 miles per hour compared to their 40. They bounded off. I returned to the cat; it was Neutron. He was suffocating, gurgling, unable to move, with minimal blood visible in his neck fur. Before I could lift him, the coyotes were back and running around beside me. If they were dogs, they would seem almost playful. I could not risk stooping down. I charged at them again at full speed, and once more they seemed to be gone.

I removed the dying animal to the kitchen floor and started to call an emergency vet number stored in my cell phone, with the land line in my other hand to call a cab. Out the window, I saw that the coyotes had returned. Again I tore out and ran full speed at them. By this time, the coyotes had learned I was no threat. They moved just fast enough to keep ahead of me. A third of the way down the block, the larger one whirled around and froze, facing me down from no more than 6 or 7 feet. If I hadn't screamed to a stop, I would have slammed into it. We

held eye contact as the slighter coyote trotted in a semi-circle into the street to my right and out of peripheral vision.

As these events transpired, all the things I had been told about coyotes 4 years earlier in a conversation with "Co-existing with Coyotes" program coordinator Robert Boelens went through my head. One by one, like a checklist, I was going, "THIS isn't true; THIS isn't true; okay, THIS isn't true either". Size. Weight. Timid. Exhibit natural fear toward humans. Children shaking a can with pennies will scare them away. Cats not a primary food item. Usually solo. Considered a nuisance animal like squirrels or raccoons. As I stood transfixed, fear for myself was added to the horror over Neutron. I wasn't going to get out of this unscathed. I hissed.

At the far end of the block, behind the lead coyote, a man walking a small white dog rounded the corner. The coyote behind me bolted on a diagonal, the one in front turned and followed. They disappeared through the schoolyard across the street. I heard the dog man, now cradling his own pet tightly, offer me firecrackers. I made my way back to the house in slo-mo. The taxi came as quickly as I could ready Neutron and myself for the journey, but the ride to the clinic was endless. Every stop or bump in the road seemed to drain the last breath out of this creature in my lap, my friend, who just a short time ago was so content on a beautiful summer evening. I kicked the door open before the cab could pull to a stop at our destination, and within a minute Neutron was receiving emergency care.

When I got home at 4 a.m., I searched the back alleys for Donovan, but he hid until well past daybreak. I came back inside and called the police. At first, the 911 operator treated me like I was the criminal. Why would I wait over 3 hours to report aggressive coyotes? Then he gave me the choice of "Co-existing with Coyotes" or the B.C. 24-hour Wildlife-Human Conflict Call Centre. I had

already figured out in the conversation years ago that “Co-existing with Coyotes” were not “cat people”, so I took the other number.

The provincial call centre operator told me that I was wrong to suggest the coyotes were aggressive toward me, that they were “just looking for their cat”. I called again the next day. The new operator told me he had been surprised by the number of complaints received since spring from the Commercial Drive area, and almost seemed apologetic about his co-worker’s cat comment. He said he would have Conservation Officer Mike Peters contact me. Later, Peters confirmed that by B.C. standards, the coyotes indeed were not aggressive. The example he gave was of a coyote that snatched a cat off its owner’s lap in a private yard in daylight hours, bumping away the gentleman’s hand in the process; this was considered no more than a “nuisance” animal. Peters said the Conservation Officer Service spends most of its time in North Vancouver dealing with bears, that there had not been a new conservation officer job posting in years, that the service would have no problem removing coyotes but it would be an “uphill battle” getting the public to agree to it, and that “Robert Boelens knows more about coyotes than we do” (M. Peters, pers. commun.).

Neutron’s condition went from critical to stable, his prognosis from guarded to more than good. But on day 8, the feeding tube detached from his stomach. By the time the vets noticed, it was too late to reverse the damage; Neutron rapidly declined, went into septic shock, and died. If you listen now, you can hear the environmentalists cheering!

## TAKE BACK THE NIGHT

I disagree with people who say domestic cats (*Felis catus*) are bad for the environment, and that any cat can be humanely confined. Neutron did no harm; he couldn’t even catch a moth. He needed fresh air; a trial of indoor living with others had caused dangerous behavioural problems (electric wire-chewing). I disagree that coyotes (*Canis latrans*) are good for the “urban ecosystem” or that the alleged “thrill” they give some people justifies the danger they pose to others.

Predator advocates will use a *Catch-22*-type argument to say my opinions have no weight because I suffered loss.<sup>1</sup> They are a vocal few who like to characterize pet owners complaining about urban coyotes as a “vocal few” (Webber 1997:10, 38-39) and who claim to represent the public at large. They have familiar titles like wildlife biologist or manager; students and volunteers proclaim themselves to be “urban ecologists”. They work within governments, public-private partnerships, non-governmental organizations (NGOs), and the media, their beliefs and recommendations guided by high-profile “environmental philosophers” / scientists who walk a shaky line between fact and faith. Vancouver’s “Co-existing with Coyotes” strategy, formulated in the late 1990s, gains credence from a well-funded continent-wide pro-predator movement embodied by the “Wildlands

<sup>1</sup> To be interested enough to comment, you must understand the threat; but if you experience the threat, you aren’t disinterested enough to comment. Though as a female, my opinions should matter very much (see Kellert and Berry 1987).

Project” now two decades running.

In 1994, when coyotes were still new to Vancouver, the (then) Ministry of Environment, Fish and Wildlife Branch said its staff would “respond to situations where there is a threat to human safety, but they are not prepared to deal with nuisance calls” (City of Vancouver 1994b). Since that time, there has been a “dramatic increase in conflicts of all kinds [reflecting] the growth in the human population, the growing interest in and access to the outdoors and the growth of some wildlife populations adjacent to or within communities” (MWLAP 2003:4).

The first two causes for rising conflicts are likely marginal compared to the last. This author could find no recent data for British Columbia or Canada, but the U.S. trend shows people spending less, not more time outdoors, with the tourism industry constantly fighting to recoup losses to things like video games and indoor fitness (Outdoor Industry Foundation 2006).

The human “population explosion” is also exaggerated. Canadian environmentalist / population control advocate Dr. David Suzuki is father of 5, but few westerners follow his example. Canada has a population growth rate of only 0.83%, similar to the United States (except Canada’s rate is largely due to immigration, not births).<sup>2</sup> In Europe, growth is low to negative. For example, the United Kingdom has a population growth rate of 0.276%; Germany is decreasing at a rate of -0.044%; most of Eastern Europe is decreasing (CIA 2008). At the world scale, the United Nations “medium scenario” projects the population will rise “from 6.1 billion persons in 2000 to a maximum of 9.2 billion persons in 2075 and [decline] thereafter to reach 8.3 billion in 2175” with most of the change occurring in less developed places, primarily Africa (United Nations 2004:2). The continent of Africa, second in area only to Asia with less than a third Asia’s population density,<sup>3</sup> is well poised for growth.

Likewise, “urban sprawl” is overrated. The City of Vancouver, British Columbia, where this author lives, “embraces density” (see Lloyd 2003, Punter 2003) or “EcoDensity” (City of Vancouver 2007), with development stacking upwards / inwards as much as sprawling out, and the surrounding Greater Vancouver Regional District (GVRD) is well circumscribed.<sup>4</sup> The City of Vancouver (11,467 hectares) takes up only 0.012% of the total area of B.C. (94,780,000 hectares)

<sup>2</sup> Immigration accounted for more than 66% of population growth in Canada from 2001 to 2004. ([http://www41.statcan.ca/2006/3867/ceb3867\\_000\\_e.htm](http://www41.statcan.ca/2006/3867/ceb3867_000_e.htm)).  
<sup>3</sup> Current population densities of the continents from highest to lowest: Asia - 203 people/mi<sup>2</sup>, Europe - 134 people/mi<sup>2</sup>, South America - 73 people/mi<sup>2</sup>, Africa - 65 people/mi<sup>2</sup>, North America - 32 people/mi<sup>2</sup>, Australia - 6.4 people/mi<sup>2</sup>. (data from <http://geography.about.com/od/populationgeography/a/popdensity.htm>). Area of continents from largest to smallest: Asia 44,579,000 mi<sup>2</sup>, Africa 30,065,000 mi<sup>2</sup>, North America 24,256,000 mi<sup>2</sup> (including Central America, Greenland, Caribbean), South America 17,819,000 mi<sup>2</sup>, Antarctica 13,209,000 mi<sup>2</sup>, Europe 9,938,000 mi<sup>2</sup>, Australia/Oceania 7,687,000 mi<sup>2</sup> (data from <http://www.worldatlas.com/aatlas/infopage/continent.htm>).  
<sup>4</sup> GVRD land use breakdown: “Urban land makes up about 30% or 87,500 hectares of Greater Vancouver’s base. About two-thirds of this has residential, commercial, industrial, institutional, transportation and communications or utilities uses. The remainder is vacant. The non-urban land includes forested areas, agricultural land, watersheds, parks and open space. Agricultural land is identified as occupying about 46,500 hectares” (Maple Ridge 2007).

(City of Vancouver 2003, Anonymous 2006c) and contains a full 14.05% of the province's population. The entire GVRD (329,202 hectares) takes up only 0.35% of the area of B.C. and contains 51.45% of its population (B.C. Stats 2006).<sup>5</sup> There are a few other well-peopled spots in this province for a population 85% urban – a demographic similar to the rest of Canada (Statistics Canada 2007) and the United States. In the U.S., only 5% of the land is developed, three-quarters of the population lives on 3.5% of the land, and the most rapid rate of suburbanization occurred before 1950 and had moderated by the 1970s and 1980s (NCPA 1999).

The British Columbia Conservation Officer Service now receives around 17,000 conflict complaints per year for a range of wildlife species, and 4,300 are considered serious enough to require attendance (Ministry of Environment 2002, MWLAP 2003:3). Coyote-pet incidents do not reach the “serious” threshold. The role of governments in contributing to the well-being of companion animals is gaining recognition,<sup>6</sup> but the Province of B.C. writes into law an abdication of responsibility that any other bad dog owner<sup>7</sup> could only dream of:

“...no right of action lies, and no right of compensation exists, against the government for death, personal injury or property damage caused by...wildlife.” (B.C. Wildlife Act 1996: Sect. 2.5.a)

One person is powerless against the environmentalists in charge. But wildlife managers are supposed to care what normal people think, and ideologies are not written in stone. If enough people agree, “Co-existing with Coyotes”-type strategies across North America warrant re-evaluation and change. With a little effort, people could take back the night for their pets, and themselves.

## MISUNDERSTOOD HEROES – URBAN COYOTES IN THE NEWS

*“Humans are expendable – two world wars proved that – but wildlife is not.” (Rundgren 2001)<sup>8</sup>*

When coyotes are new to an area, predation on pets is newsworthy. As “coexistence” takes hold, only timely, dramatic, or unusual events warrant coverage, and journalists minimize or give conflicting information on the extent of pet depredation. Reports shift to admiration of coyotes and “irresponsible pet ownership”.

Early on, Vancouver urban coyote promoter Dee Walmsley (2000) wrote of a den containing 55 cat collars, but then assured people coyotes “feast on rats, rabbits and other rodents considered pests by humans.”<sup>9</sup> Page (2000)

recounted numerous attacks on pets but dismissed coyote-den cat-collar finds as “tall tales” and “rumours”. A spokesperson for the BCSPCA appeared in a summer 2007 TV report about missing cats in South Granville, Vancouver, saying, “It happens once in a while, we’ll get a call from a certain neighbourhood that’s concerned,” and that the SPCA gets “several cases” of coyote attacks on pets per year (Adams 2007). Elsewhere, coyotes now kill “the occasional house cat” (Blanchard 2004), there were “several coyote attacks” on pets in Calgary in 2004 (Proudfoot 2006), or residents tell “tales” of coyote attacks on urban dogs and cats (Davis 2005).

South Florida was a 2008 hotspot for new coyote migration, so the news was rife with cat attack stories (e.g., Staats 2008) while “experts” scrambled in the background, inventing excuses for doing nothing.<sup>10</sup>

Far from a threat, coyotes in the news today are “misunderstood heroes” and “well-mannered, responsible predators” (Downes 2005). Coyotes are “amazingly intelligent” (Proudfoot 2006); they are “surprisingly docile” according to Dr. Stan Gehrt (Berger 2005). “Professor Gehrt says with confidence that the sensible suburban toddler has little to fear from the suburban coyote” (Downes 2005); Gehrt tells Battiatia (2006), “I would never be subordinate to a coyote, ever,” though he adds, “I’m 200 pounds.”<sup>11</sup> After coyotes charged leashed dogs on a walking path in San Francisco’s Golden Gate Park, one biting a large Rhodesian ridgeback, the director of a wildlife rescue shelter told a reporter, “[Coyotes] are so timid. If you give them five seconds, they will usually run”, and speculated the dogs were at fault (Zamora 2007); the coyote pair’s later control kills were described as “executions” (Anonymous 2007a).

While overseeing Vancouver’s “Co-existing with Coyotes” program, Robert Boelens did his best to direct interviews toward the animals’ low risk to humans. Coyote advocates are in a much stronger position when they successfully keep the focus on the tip of the iceberg and away from pets. When pets must be discussed, minimizing coyote predation is far less confrontational than the second-line defence of openly belittling the value of cats and dogs and ridiculing their owners (see Page 2000, Lott 2005). If a specific situation required it, Boelens would admit that “sightings – and even attacks on outdoor cats – aren’t out of the ordinary” but denied being “inundated with calls” (O’Connor 2005a). Just two months after that assertion on the west side of Vancouver, Gail Telfer of the Wildlife Rescue Association of B.C. a few miles east told a Burnaby newspaper, “It’s really

<sup>5</sup> British Columbia Municipal and Regional District 2006 Census Total Population Results: City of Vancouver population of 578,041; B.C. population of 4,113,487; GVRD population of 2,116,581.

<sup>6</sup> In the aftermath of Hurricane Katrina, the U.S. Government suggested federal funding would be cut to states that do not include pets in future emergency evacuation plans (Fargen 2006).

<sup>7</sup> “Ownership in all wildlife in British Columbia is vested in the government” (B.C. Wildlife Act 1996: Sect. 2.1), consistent with other North American legislation.

<sup>8</sup> This letter to the editor in January 2001 was one of many that capped the high-profile year 2000 during which 1 adult and 3 children were bitten by coyotes in Vancouver.

<sup>9</sup> Walmsley, a wildlife rehabilitator and member of the Board of Directors of the Stanley Park Ecology Society and “Urban Wildlife Management Committee” (see section entitled “If You Build It, They Will Come”), is acknowledged in

Webber 1997:ix for guidance in making the “Urban Coyote Project” video (Delta Cable Communications, Ltd. 5381 48th Ave., Delta, B.C., Canada V4K 1W7) – an emotion-laden video for children and adults, complete with old newsreel footage and voice-over of aerial killing of coyotes, presumably in the American Midwest, as in most of North America the technique is not even used (see Fox and Papouchis 2005:13-14)

<sup>10</sup> For example, because 2-million-year-old fossil fragments of an extinct coyote-like canid were found in Florida, the Fish and Wildlife Conservation Commission says the newly arrived coyotes should be considered a native or “naturalized”, not “exotic”, species (McCown and Scheick 2007).

<sup>11</sup> But Gehrt showed his preference for predators over people long before, writing a human overpopulation paper for *Conservation Biology*, inspired by a visit to Yosemite National Park that left him with “haunting” images of an area congested with human bodies (see Gehrt 1996).

remarkable how many cats they kill” (Anonymous 2005). Both statements are political. “Co-existing with Coyotes” has data indicating coyotes kill between 1,000 and 2,000 cats per year, by conservative estimates, within the City of Vancouver alone (adapted from Kirsch 1996),<sup>12</sup> but admitting it would diminish the value of a program that is supposed to protect both people and pets. On the other hand, wildlife rescue groups have an uninhibited interest in emphasizing coyote predation to encourage people to take their cats out of the “urban ecosystem”. In the United States, “Each year rehabilitators report cat predation as the most common reason for animal admission, accounting for almost 20% of cases” (Burton and Doblar 2004).<sup>13</sup> Of interest, before moving over to “Co-existing with Coyotes” in 2001, Robert Boelens worked for the Wildlife Rescue Association of B.C. Along with coyotes, he has a passion for birds.

Indoctrination works. As seen from the quote at the beginning of this section, it is possible for a grandmother to value coyotes over humans, though perhaps not her own family. Rundgren’s conclusion is a hybridization of two ideas flowing from Deep Ecology principles: that wild animals are more important than domestic ones, and that people who embrace primitive ways / population control are superior to industrial humankind (see Devall and Sessions 1985, Taylor 2001, Noske 2004).

## CONSERVATION BIOLOGY 101 – AN INTRO TO POLITICAL SCIENCE

Promoters of urban coyotes follow the views of American Conservation Biology. Scientists in this discipline

“...profess to be experts on an array of economic, ecological, and even aesthetic and spiritual values of biodiversity that would seem to stretch the limits of what we normally consider to lie within scientists’ expertise... In so doing, biologists jeopardize the societal trust that allows them to speak for nature in the first place.” (Takacs 1996:4)

Dr. Michael Soulé, the Father of Conservation Biology (Hanscom 1999), studied under Paul Ehrlich of *Population Bomb* fame, whose doomsday predictions, like those of other eco-oracles of the time, remain unfulfilled. Both Soulé and Ehrlich willingly associate themselves with what Ehrlich calls the “quasi-religious movement” of Deep Ecology (Takacs 1996:268-269).

By the late 1980s, Soulé felt he “could not sit back and be an ‘objective’ scientist” in the face of a human-race driven extinction crisis “on par with the

disappearance of the dinosaurs and Pleistocene creatures” (Hanscom 1999), a highly debatable interpretation of the current situation on the planet (see Takacs 1996:52-53, Lomborg 2001). Even Soulé colleague L. Scott Mills concedes “uncertainty in the analysis may still spawn legitimate debate as to whether current extinction rates are yet as high as those of geological mass extinctions” or will become so (Mills 2007:13).<sup>14</sup> Advances in genetics and other high-tech fields have profoundly weakened the old loss-of-biological-diversity arm-twister. Cloning provides a safety valve for current endangered species (see Black 2005) and resurrection of long-extinct species will likely occur within a decade (see Holloway 2002).

Soulé, who acknowledges the tears in his eyes during lectures have more impact than an hour of logical argumentation (see Jones 2003), speaks of the tactics conservation biologists must use:

“Though it may sound heretical, our primary objective as conservationists (not as educators) should be to motivate children and citizens, not necessarily to inform them. Research may show that the two objectives are incompatible...the new motivators for nature might take a page from the advertiser’s book... We must learn from the experts – politicians and advertising consultants who have mastered the art of motivation. They will tell us that facts are often irrelevant.” (Takacs 1996:129)

This new approach marked a change in direction from hard-won progress at the dawn of modern science, before which telling the truth, not emotional appeals and marketing, was heretical, landing Galileo and predecessors in the slammer or worse. However, sophisticated eco-marketing techniques were emerging concurrently in another field of study called Human Dimensions.

Conservation Biology “...derives its theoretical basis from the pure sciences... to address applied problems in the maintenance of biodiversity” (Knight 1990). The word “biodiversity” was coined in the mid-1980s to provide a broader strategy than defending individual endangered species (Takacs 1996:37,41,45). The term “...stands for the biological wealth and complexity whose depths biologists have scarcely begun to plumb... When they employ the concept of biodiversity, biologists mean to turn the depth of their ignorance from a seeming weakness into a unique strength. They seek to use this ignorance as a lever, not only to promote their conservation goals, but to advance the privileged position from which they speak for those goals.” (Takacs 1996:83)

Conservation biologists apply the “precautionary principle”: “Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation” (United Nations 1992). “Precautionary principle” adherents “see

<sup>12</sup> Coyotes need about 2 lb of food per day. In Webber (1997:52), the most conservative estimate for cats eaten is 11%, obtained by combining GVRD scat and stomach analysis. In 2001, the City of Vancouver coyote population was estimated at 200-250 (City of Vancouver 2001). Therefore, 11% of 2 lb = 0.22 lb × 365 days/year = 80.3 lb of cat per coyote per year × 200 coyotes = 16,060 lb divided by an average outdoor cat weight of 12 lb = 1,338 cats/year eaten. For the 250 coyotes, it is 80.3 × 250 divided by 12 = 1,673 cats/year. By scat analysis alone, cats represent about 15% of the diet and results increase accordingly. The Vancouver diet analysis is similar to findings in Quinn (1992:65) based on far more extensive scat collection at two urban sites in northwestern Washington.

<sup>13</sup> Cats’ reputations suffer thanks to the diligence of their owners – such reporting, however, represents “detection bias” and reveals not a thing about the actual contribution of cat predation to overall wildlife mortality.

<sup>14</sup> But Mills’ most conservative way of calculating modern extinction rates may still exaggerate today’s trends, because it considers documented extinctions of described birds (120) and mammals (60) over the past 400 years. But, very few extinctions have occurred post 1914, and the bulk of extinctions before (and after) that date are the fallout of historical events that now would be unthinkable.

power in its ambiguity” but it is now so often misapplied that it results in “arbitrary and capricious” policy-making that will “collapse on itself but not before doing serious harm” (Marchant and Mossman 2004).

In 1991, Michael Soulé founded the Wildlands Project with ex-Earth First! leader / eco-felon Dave Foreman<sup>15</sup> and other prominent Earth First! members, including Reed Noss (Hanscom 1999). The Wildlands Project remains today the central organizing body for “rewilding” and, more recently, “Pleistocene rewilding.”<sup>16</sup> The goal of “rewilding” is to saturate North America with pre-European-settlement levels of predators; “Pleistocene rewilding” shifts the time line, aiming to “restore” animals closest to the “megafauna” that disappeared 10,000 years ago to include elephants, camels, cheetahs, and Holarctic lions (Donlan et al. 2006). By either approach, large carnivores will act as “umbrella species” to protect all other “less charismatic” animals existing within large and interconnected rangelands (see Wildlands Project *no date*, Soulé and Noss 1998). Other “species concepts” include “keystone species” (having a disproportionate effect, admittedly hypothetical, and central to the “rewilding” argument) (Soulé and Noss 1998), “indicator species” (ecosystem canaries in a coalmine), “flagship species” (not remotely scientific, but a Human Dimensions eco-marketing tool to engage the public in assorted conservation initiatives), and “focal species” (strongly Human Dimensional through targeted species awareness campaigns).

“Rewilding” is meant to supersede species-by-species and biodiversity conservation models and legislation. However, the Wildlands Project’s four “megalinkages” take up much of the continent including areas of concentrated human habitation (see map at [http://www.twp.org/files/pdf/reconnecting\\_map.pdf](http://www.twp.org/files/pdf/reconnecting_map.pdf)). Three admissions by “Pleistocene rewilding” strategists – that implementation will begin with “owners of large tracts of private land”, that “secure fencing would be a major economic cost”, and that the public will need to accept “predation as an overriding natural process and the incorporation of pre-Columbian ecological frameworks into conservation strategies” (Donlan et al. 2006) – plainly show that wildlife-human conflict will escalate far beyond today’s already dramatic trends, and that the public should have little say in the matter.

In 2004, the Wildlands Project discontinued its popular deep ecology magazine *Wild Earth* (Dave Foreman was variously executive editor or publisher), allegedly due to financial constraints. Instead, Dave Foreman and the Board of Directors of the Wildlands

Project established the Rewilding Institute<sup>17</sup> in August 2003 as an independent think tank, where Foreman continues his trademark population control and anti-industry rants to his heart’s content.<sup>18</sup> The Wildlands Project accepts small donations and solicits struggling rural Americans to participate in “private landowner opportunities”<sup>19</sup> (Wildlands Project *no date*) but, like most of the environmental movement, is funded primarily by the ultra-rich land-owning elite with most to gain by suppressing democratic development and progress.<sup>20</sup> Billionaire Ted Turner, America’s largest private landowner, is one Wildlands Project / “Pleistocene rewilding” grant-giver (Schwartz 2005, Donlan et al. 2006) and stands accused of promoting a “new form of feudalism”, engaging in “green fascism” (Schwartz 2005), and driving up rural property values to force long-time family farmers and ranchers out of business (Jenkins 2007). Turner himself fences in his profitable pay-per-trophy game ranches, preventing free movement of his bison herds and other wildlife (O’Gara 2004) despite the open-corridor concept of “rewilding”. He is not above controlling predators either, including coyotes, when it suits him (see Massey 1999, West 2002); and at least one 360,000-acre ranch, Armendaris, lacks coyotes (Bryan 2007) despite New Mexico being their historical range.

## CONSERVATION BIOLOGY 201 – COYOTES ARE FOR THE BIRDS

*“And coyotes killing cats is the best thing that could happen ecologically, as cats kill thousands of birds and other animals each year on the Cape (and this comes from an indoor cat owner).”*<sup>21</sup>  
(Way 2006)

One cannot address the issue of urban coyotes without talking about cats and songbirds. For many environmentalists, the killing of cats by coyotes is not the collateral damage of *laissez-faire* management, but a desired result. Unfounded statements about the negative effects of domestic and feral cats, and direct marketing about the unproven benefits of urban coyotes, are key weapons in the war chest of pro-predator activists. Scientists who offer figures for annual cat predation on birds, for instance, know better than anyone that these numbers, even if accurate, do not translate into inevitable population impacts. But, misleading statements will hobble owners from angry protest when the pets they

<sup>15</sup> Former Earth First! leader and co-editor of the eco-sabotage manual *Ecodefense: A Field Guide to Monkeywrenching*, in 1991 Foreman pled guilty to conspiracy to damage the property of an energy facility and bargained his way out of serving time in jail. Others in the group received from 30 days to 6 years’ imprisonment (<http://www.tkb.org/CaseHome.jsp?caseid=295>). Around that time, Foreman co-founded the Wildlands Project with Michael Soulé (see Hanscom 1999); he later blamed his Earth First! days on clinical depression now properly treated with medications (Bergman 1998).

<sup>16</sup> “Pleistocene rewilding” was first proposed in Donlan et al. (2005, 2006); not surprisingly, these papers are co-authored by, among others, Dave Foreman and Michael Soulé. Read about “Pleistocene rewilding” at the Rewilding Institute website, [http://www.rewilding.org/pleistocene\\_rewilding.html](http://www.rewilding.org/pleistocene_rewilding.html).

<sup>17</sup> Foreman is the executive director and senior conservation fellow. “Science fellows” who do outreach and are “experienced and knowledgeable leaders of the citizen conservation movement” include Kevin Crooks, Michael Soulé, and prominent Canadian biologist/wolf attack defender/garbage-dump and dog-disease-vector theorist Paul Paquet (see website <http://www.rewilding.org/>).

<sup>18</sup> Foreman’s “Around the Campfire” columns are found at <http://rewilding.org/rewildit/tag/around-the-campfire>.

<sup>19</sup> Dovel (2007a) explains the sleaze factor behind such The Nature Conservancy style programs “to save the family farm and ranch from developers”.

<sup>20</sup> See the website <http://www.ecofascism.com/> for many insightful articles on this topic.

<sup>21</sup> To be clear, the indoor cat was not necessarily his. In a field update for the soon-to-be-Dr. Way’s coyote study, he writes, “I am not a do-gooder or tree-hugger. My family has had cats and dogs and I love them” (Way 2005). However, the litmus test for a deep ecologist is not absolute lack of a cat (as here, claiming cat ownership makes Way seem more human) but whether the cat is allowed outdoors.

allowed “into the food chain” (as pro-coyote bloggers sometimes put it) are killed. Switching the label of “vermin” from coyotes to cats (and domestic dogs) will engender tolerance for coyotes, despite their harm. Most importantly, the coyote makeover is supposed to foster in urbanites positive attitudes for the bigger and better carnivores yet to come (see especially Crooks 1999). The discussion and critique in this section, then, is to show that the coyote people, and to a lesser extent the bird people, are telling lies at the expense of the cat people.

### **One Less Cat – The “Mesopredator Release Hypothesis”**

In the late 1990s, Michael Soulé and then-student / rising-star Kevin Crooks studied coyotes, cats, and songbirds in canyon “habitat islands” in highly urbanized San Diego, California to test the “mesopredator release hypothesis”. This hypothesis was proposed by Soulé in 1988 “...as a possible mechanism to explain the rapid disappearance of scrub-breeding birds... It predicted that the decline of the most common large predator (coyote) would result in the ecological release of native (striped skunk, raccoon, grey fox) and exotic (domestic cat, opossum) mesopredators, and that increased predation by these effective predators would result in higher mortality and local extinction rates of scrub-breeding birds.” (Crooks and Soulé 1999:563)

Crooks and Soulé (1999) found, as they had predicted, that coyote presence and/or abundance in habitat fragments was associated with lower total “mesopredator” abundance. However, only some “mesopredator” species avoided coyotes; and the most important predictor of house cat abundance was not coyotes but fragment size – smaller canyons were surrounded by proportionately more houses, where people and cats reside. Larger fragment size was a positive predictor for mean coyote abundance and bird diversity. Beyond the monumental landscape effects, Crooks and Soulé used “backward elimination multiple regression (BEMR) analyses” to tease out additional correlations between decreased scrub bird diversity and cat and raccoon abundance; increased scrub bird diversity and coyote presence. The computer program did not disconnect cat-bird from raccoon-bird associations.

“Statistics aren’t science” (Milloy 2001) because mere associations do not prove causation, but Crooks and Soulé (1999) hypothesized a causal link between coyotes, cats, and birds based on observations that coyotes killed cats (giving no information about what other “mesopredators”, birds, small mammals, or reptiles coyotes killed); that canyon-side cats were “recreational hunters” of native species (giving no information on the extent to which other “mesopredators” killed native species); and that foxes, cats, and skunks (but not raccoons and opossums) avoided fragments when coyotes temporarily visited. These things and the fact that cats “are maintained far above carrying capacity by nutritional subsidies from their owners” (ignoring coyotes and numerous other synanthropic predators / omnivores are also “subsidized” / densified by humans via urban resource input, nowhere more than in otherwise arid cities like San

Diego) led them to conclude, “The interactions between coyotes, cats and birds probably have the strongest impact on the decline and extinction of scrub-breeding birds.”<sup>22</sup>

In addition to this study, published in the “Letters” section of the mainstream American journal *Science*, Crooks elaborated on coyotes and cats for *Wild Earth*. In his article “Tabby Go Home”, Crooks (1998) advocates in plain English purposely populating cities with coyotes to eradicate outdoor cats through direct killing or terrorizing owners into keeping them inside:

“Coyotes certainly kill domestic cats, as evidenced by cat remains both in the canyons and in the scat of coyotes... Although coyotes directly affect cats, perhaps the strongest impact of the presence of coyotes is on the behavior of cat owners...just the threat of native predators in the neighborhood is enough for some people to restrict their cats’ wanderings.

“Consequently, the presence of coyotes in urban natural areas may benefit small, native species by reducing the numbers and activity of these non-native and super-abundant felines. Coyotes may act as a ‘keystone predator’ in such regions. The disappearance of top predators can cause an ecological unbalance that ripples down the food web through small predators to smaller prey... Unless strong reasons exist to do otherwise (such as coyote predation on threatened or endangered species), conservationists should oppose the control of large carnivores in these systems. It is also essential that urban habitat fragments maintain connectivity to larger natural areas that currently support source populations of coyotes and other large predators. Where functional movement corridors are not retained across the urban landscape, many wildlife populations, particularly carnivores, will eventually disappear.” (Crooks 1998)

### **Keystone Critics**

Leading bird scientists discuss the shortcomings of these typical 1- to 2-year correlation-type studies and suggest experimental, mechanistic research, though rare, is more rigorous and compelling. It is also important to remember indirect effects less obvious than predation and to determine how these “bottom-up” factors affect birds (Marzluff et al. 2001:x,xii,1).

Patten and Bolger (2003) reiterate others’ findings that the chief determinant of reproductive success in birds is the rate of nest failure and the major cause of nest failure predation. They remark that Conservation Biology textbooks prominently feature certain studies that

<sup>22</sup> The words “extinction” and “local extinction” are thrown around carelessly by Crooks and Soulé (1999), making their study more provocative. “Local extinction” does not mean extinction or even extirpation; “locally extinct” birds can be abundant a short distance away. In fact, of their study’s 8 species of concern, only the California gnatcatcher (*Polioptila californica*) is listed (as “threatened”) under the Endangered Species Act (USFWS 1993). Scientists in less politico-religious fields use words like “disappeared” instead of “local extinction” (see Shochat et al. 2006); “decolonization” would be even better, fitting well with the term “recolonization” used to describe “extinct” populations that later fly back into a study (for example, see Crooks et al. 2001).

result in the impression of a general relationship between nest predator abundance and fragmentation, but that the generality of the relationship is questionable. These scientists also studied birds in coastal sage scrub fragments of similar size and location to those of Crooks and Soulé and “found no evidence for a general relationship between fragmentation, predator abundance, and avian nest success” and “did not find evidence to support the hypothesis that mammalian mesopredator release causes reduced avian nesting success in habitat fragments” (Patten and Bolger 2003:484,485). They attribute the results in Crooks and Soulé (1999) to inadequate consideration of the entire suite of animals interacting within these micro-habitats:

“The rich predator community in coastal sage scrub has a diversity of responses to habitat edges and fragments and this prevents the linear top-down trophic cascade proposed by Crooks and Soulé (1999). In addition to mesocarnivores, avian predators and snakes are significant predators of nests and of adult and juvenile birds. These predator groups have divergent responses to fragmentation in coastal sage scrub. Also, predator guilds may interact with each other in complex ways, including intraguild predation (Polis et al. 1989). For example, snakes may consume avian predators, mesopredators may consume snakes, and raptors may consume small mammals... In our system, snakes appear to be the most potent predator on nests, but raptors and mesocarnivores may be the most potent predators of adults and fledglings. If a cascade does occur, it is therefore more likely caused by increases in mortality of fledglings and adults rather than predation of eggs and nestlings... It seems unlikely to us that control would be exerted from only one direction. Our data show, for example, that top-down control (by snakes) largely determines the fate of ground nests in an average year, but bottom-up control determines the fate of all breeders in a bad year (Patten and Bolger, [2003] in prep; Morrison and Bolger 2002). Indeed, because the ground-nesting species we studied do not persist on fragments, where the top-down control is removed, there must be additional control exerted elsewhere.” (Patten and Bolger 2003:486)

Regarding the impact of cats on birds, Crooks and Soulé (1999) gave no breakdown of the native species component of 68 prey items collected for them by cat owners (a meager *actual* sample in light of the study’s enormous hypothetical cat predation extrapolations). If any of the 8 high-concern birds “that specialize on chaparral and coastal sage scrub habitat and rarely breed in developed sites” (Crooks and Soulé (1999:565) had been identified therein, most certainly the researchers would have reported it triumphantly. No data were supplied on whether hunting and non-hunting cats were equally likely to be restrained by owners when coyotes were present or equally susceptible to depredation.<sup>23</sup>

<sup>23</sup> However, an observation by Crooks (1998) supports the possibility that coyotes kill cats least likely to be seasoned bird hunters: “It seems that experi-

A mechanistic approach might have looked for direct negative effects of coyotes on birds. Coyotes and unleashed dogs are known disturbers of nests in other habitats (discussed later). If coyotes were knocking down and trampling nests, particularly in the compromised canyons they temporarily visited, it would augment the well-documented nest predation of non-avoidance raccoons and opossums while the avoidance cats, rarely identified as significant nest raiders,<sup>24</sup> would continue to have little effect either way. Alternatively, coyotes stopping over in the smallest canyons might induce unsought but irresistible hunting opportunities for lazy cats by flushing fledglings and adult birds into backyards.

### The Coke-Machine Effect

Crooks (1998) poorly interpreted his survey results when he suggested coyotes helped birds by effectively changing cat owner behaviour (the figurative part of coyote as “keystone predator”). Although 71% of residents bordering the study sites realized coyotes were a threat to their cats and 46% of cat owners restricted their cats’ outdoor activity when they believed coyotes were in the fragments, 77% of owners still let their cats outdoors (Crooks and Soulé 1999).<sup>25</sup> This percentage is well above an estimate given by Winter (1999) around that time, who wrote that only 35% of owned cats never go outside – leaving 65% that do. Methods of restriction were “letting the cat out only during the day, restricting the cat to a patio or fenced yard, and even leashing the cat when out” (Crooks 1998). Probably the most used method was first on the list, but restricting cats at night would “have little, if any effect on predation on birds” (Fitzgerald and Turner 2000:171) which are mainly caught by cats during the daytime (RSPB 2007).

As for the literal part of coyote as “keystone predator”, actual coyote predation on cats was also affecting overall cat abundance poorly, if at all. Crooks and Soulé (1999) observed, “Cat remains were found in most fragments with coyotes, and 21% of 219 coyote scats collected in these sites contained cat remains.” Forty-two percent of all cat owners in areas with coyotes reported that coyotes had attacked or killed their cats – but, they were still cat owners! In fact, 32% of residents bordering the San Diego fragments owned cats (Crooks and Soulé 1999), slightly above the national average (APPMA 2002); likewise, the 1.7 cats per owner matches national data of the time.<sup>26</sup> This part of the system is as “natural” as a Coke machine: if you are a Coke drinker

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enced cats learn to avoid canyons when coyotes are present, whereas naive pets who do venture into the canyons where coyotes occur often meet a violent end.”

<sup>24</sup> Even Rogers and Caro (1998), cited in Crooks and Soulé (1999) as a positive test of the “mesopredator release hypothesis”, did not detect or discuss predatory cats at all in their Michigan agricultural study, instead identifying raccoons, opossums, and skunks as the most common mammalian predators of, in their case, ground-nesting song sparrows.

<sup>25</sup> Kays and DeWan (2004), studying inside-outside hunting cats around the suburban Albany Pine Bush Preserve in New York, also found the coyote threat has little effect in changing owner behaviour: In their study, despite 32% of respondents believing coyotes were a threat to outdoor cats, only 4% restricted their pets; of indoor-only cat owners, only 15% listed coyote threat as a reason for restriction.

<sup>26</sup> 49% of cat-owning households own one cat; the remaining 51% own two or more (APPMA 2002).



and someone takes away your Coke, before long you go get another one. It has never been the American way to let terrorists, even if disguised as conservation biologists, dictate lifestyle choices.

On the 48 real islands where cats have been eradicated, environmentalists used not “keystone predators” but combinations of hunting (sometimes with dogs), trapping, poisoning, and intentional release of panleukopenia virus (Foley et al. 2005). Animal rights groups flaming public indignation over the same sorts of techniques used on coyotes – aerial gunning, hunting, trapping, Compound 1080 – certainly help out the “rewilding” movement; but conservation biologists themselves, whether on real or “habitat” islands, can claim no moral high ground about how they go about killing their enemies (see also Noske 2004).

“Although the mesopredator release hypothesis has received only limited critical evaluation and remains controversial, it has become the basis for conservation programmes justifying the protection of carnivores” (Crooks and Soulé 1999:563). In fact, Crooks and Soulé (1999) is cited glowingly by most coyote researchers and by organizations like the activist American Bird Conservancy, particularly their Cats Indoors! wing. Among other activities, Cats Indoors! encourages citizens to lobby local governments for mandatory cat licensing and restraint legislation (see ABC *no date*). Environmental activism – not government “cash grabs” and certainly not concern for the welfare of cats – is the primary force behind these ordinances.<sup>27</sup> Only environmental extremists could dream up sweeping laws that single-handedly empower malicious cat haters, pick on the most vulnerable members of society (the poor, elderly, and disabled), and do nothing to improve the ecology of birds. To “precautionary principle” devotees, however, the coyote as “keystone predator” is especially tantalizing in light of the reluctance of cities to enact the desired bylaws, or inability to enforce them,<sup>28</sup> and the “troubling” indifference and/or resistance, even by educated people, to messages about voluntary confinement of cats (see Lepczyk et al. 2003:198). A Cats Indoors or Else! philosophy also underlies Vancouver’s “Co-existing with Coyotes”. Program founder Kristine Webber (Lampa), while Executive Director of the Stanley

<sup>27</sup> American Conservation Biology’s influence over animal welfare policy is especially apparent when contrasting the United States to the United Kingdom: “In the USA it is common to have leash laws [for cats] or laws forbidding animals to go outside at all, and/or to restrict the number of animals one person may keep. Not only is this unknown in the UK, but in fact cats have the right to roam freely, and in law a cat owner is not liable for any damage resulting from the cat’s behaviour... In the USA, you are likely to be turned down by a shelter if you admit you plan to allow your cat to go outdoors. However, in the UK in particular, you are likely to be turned down if you admit you plan to keep your cat indoors!” (Harpis’s website, “Home Of The Walking Veterinary Encyclopaedia”, [http://www.harpis.com/indoor\\_outdoor\\_cats.htm](http://www.harpis.com/indoor_outdoor_cats.htm)).

<sup>28</sup> Some places that currently have such legislation include Overland Park, KS (neighbour must complain to owner); Muscle Shoals, AL (aggrieved party must swear an affidavit before a judge or magistrate); Aurora, CO (violators are subject to fines of \$15 to \$1,000 and up to 1 year in jail (HSUS 2002:9-11); Albuquerque, NM (Dave Foreman’s hometown) (mayor admits no ability to enforce) (Animal Law Coalition 2006); Calgary, AB, Canada (complainant must rent a humane trap from Calgary Animal Services to personally catch and transfer trespassing cat) (City of Calgary 2006, also [http://www.calgary.ca/docgallery/bu/animalservices/responsible\\_cat\\_ownership.pdf](http://www.calgary.ca/docgallery/bu/animalservices/responsible_cat_ownership.pdf)).

Park Ecology Society (SPES), told an Edmonton, Alberta journalist (one province and hundreds of miles away from Vancouver, B.C.) that “as long as people continue to let their cats roam free, cats will be easy pickings for coyotes” (Page 2000); and from this author’s experience with two program coordinators, the songbird-killing alien species part is only a phone call away. Answer 10 of the recently created “Coyote Quiz” (SPES 2008) pushes the envelope just short of Crooks (1998) and Crooks and Soulé (1999) by saying coyotes are beneficial to songbirds by killing *feral* cats (a declaration for which program coordinator Robyn Worcester was unable to provide appropriate scientific backup during a protracted email exchange with this author, July-October 2008).

### Catastrophic Cats? or The Mother of All Tails

In “Tabby Go Home”, Crooks transports the reader through a house of horrors of the havoc wreaked by cats, in so doing highlighting most of the literature predator advocates rely on in their anti-cat propaganda campaigns.

Cats are maintained by humans “at numbers up to 100 times or more the typical abundances of wild cats and other mid-sized predators” (Crooks 1998). Coleman and Temple (1993) was cited for this claim, but that study’s worst-case projection of 40 to 44 free-ranging rural farm cats/km<sup>2</sup> occurred in only 2 out of greater than 50 counties, with most farm cats “projected to be in livestock-raising counties where densities reached 9 farm cats/km<sup>2</sup>,” similar to springtime raccoon densities in south-central Wisconsin; the highest rural non-farm cat density was 38 cats/km<sup>2</sup> (Coleman and Temple 1993:388,389). Raccoons, skunks, and opossums are among the bad “mesopredators” in San Diego but apparently defensible in Wisconsin.

“Cats are recreational hunters that kill for fun, even if they are nutritionally subsidized by humans” (Crooks 1998). Conservation biologists do like to grind home the idea that well-fed cats will hunt, but according to Fitzgerald and Turner (2000:162) “it is a question of how intensively they hunted, and comparisons are difficult.” Using Crooks’ inflammatory language, coyotes are also “recreational hunters that kill for fun” as they will play with their prey before devouring it (Senécal et al. 1990) and, when possible, engage in surplus killing (Andelt et al. 1980), also known as “henhouse syndrome”. Predators in the wild are “rewarded not just by completing the whole predation act – eating the prey – but also by successfully carrying out each of the four behavioral components [search, pursue, kill, and consume] independently” (Mills 2007:168). The references Crooks gave for his cat-specific accusation were poor to contradictory. Similarly, the only moderately relevant citation for the same accusation in Coleman and Temple (1993) or any of their subsequent reports<sup>29</sup> was Polsky (1975), a review of controlled

<sup>29</sup> Later, Coleman et al. (1997) referenced only Adamec (1976) to try to differentiate cats from other predators as maintaining the hunting drive even when adequately and regularly fed, but that experiment involved highly stressed cats repeatedly starved over 2-day cycles, then presented with their favourite food and a rat with no means of escape. “These data suggest that eating is not a terminal ‘consummatory’ component of preying as a food-getting response. Hunger may be seen as a potentiator of a predatory tendency which takes

experiments both supporting and refuting a direct relationship between hunger, killing, and feeding. Polsky concluded these drives appear to be separate in experienced and specialized predators, by no means singling out cats (though they were lab animals in some of the tests). Regarding the “fun” part, Leyhausen (1988:58-60) believes predatory behaviour spontaneously activates itself in a non-hungry animal and that “games” with prey teach about manipulation and physical properties, experience that could be gained in no other way. Fitzgerald and Turner (2000:155) say of cats, “Release of tension after a kill may result in ‘overflow play’ in cats; ‘playing’ with a large or difficult prey may reduce its ability to defend itself as it tires.”

No citation whatsoever was given by Crooks (1998) or Coleman and Temple (1993) to back up their most contentious generalization, that even when prey reach low or dangerously low levels, cats, unlike other or native predators, will continue to hunt and kill instead of switching to alternate prey. At least one of their own references, (Davis 1957), though cited only for the hunting-despite-supplemental-feeding truism, revealed farm cats did switch prey (from rats to pigeons, with neither species annihilated).<sup>30</sup>

Crooks (1998) then referred to 3 American reports that make generalizations from observation of 5 or fewer cats. Mitchell and Beck (1992) recorded kills brought home by a single rural and 4 urban cats, in order to estimate possible devastation to Virginia wildlife. The rural cat in particular was prolific, atypical, and distinctly precocious, killing almost as many birds as mammals and also seen stalking grey fox (*Urocyon cinereoargenteus*), raccoon (*Procyon lotor*), and opossum (*Didelphis marsupialis*). At the end of the study, however, the authors stated the primary purpose of presenting and extrapolating from such a small data set was not to be accurate but to stimulate more careful and detailed studies in the future.

George (1974) thought if all the cats in America were catching as many rodents as the 3 cats at his farmland home in the Illinois Ozarks, it might cause winter shortages of raptor prey: “I am not suggesting a cause-and-effect relationship exists between the historical increase of cats and the historical decrease of raptors; however, cats, which are as efficient in their way as guns and DDT, accompany and add another dimension to man’s encroachment into wildlife areas” (George 1974:384). A cause-and-effect relationship, however, is exactly what was inferred. This had nothing to do with urban cats though, and it apparently has little to do with raptors either: although American cats have almost tripled in the 30 years since this study, the Canadian and U.S. populations of the hawks of concern to George are considered secure (Hawk Mountain 2007) and none are listed as endangered or threatened (Environment Canada 2006a, USFWS 2007).

To support the claim that actual predation rates attributed to cats are surely underestimates, Crooks (1998) misquoted George (1974) as having said cats bring home only 50% of prey kills. This idea has been repeated widely, though it is unfounded (Fitzgerald and Turner 2000:170-171). In fact, George (1974:388-389) doubled his prey figures from those actually logged, based on a test comparison of prey recorded when his “delivery area” was under continuous observation and when scrutinized for lesser amounts of time; reasons offered for underestimating prey were that cats might swallow it or scavengers might eat it before observation, or it could be hidden from view under leaves and grass.

Crooks described the cat studied by Bradt (1949) as having “killed over 1,600 mammals and 60 birds in 18 months” (Crooks 1998). Conservation biologists and Cats Indoors! people always say this; but the study itself describes the cat in question as retriever, not mass murderer, with his keepers deciding the fate of most prey. Dr. Bradt began the study at a Michigan Department of Conservation wildlife experiment station where he resided, after a young cat, one of a litter at his residence there, showed a tendency to bring all prey, except for shrews, into the house through a small swinging door. The cat would announce its arrival by loud meows and was always praised and petted regardless of the hour of day or night or species caught:

“The cat is remarkably gentle with his prey, and most of his captures, even the small birds, are apparently uninjured. In fact, many of these have been released by us, and have flown away at once.” (Bradt 1949)

Gentle handling of live prey is not entirely astonishing: a cat may perceive his human as a “deputy kitten” or may be in conflict about what to do with a catch (Turner and Meister 1988:119-120); it is also debated that early in domestication, cats were used by hunters to retrieve game (Serpell 2000:183). However, the point Bradt (1949) wanted to make was that his cat’s hunting record, when considered with the few authentic food studies on cats then available, cast doubt on the belief among sportsmen and wildlife technicians that cats were vicious predators of songbirds and game. Bradt knew his cat’s behaviour was remarkable, and the need of anti-cat activists to rely on / misrepresent this 60-year-old impromptu single-cat study solely for its inflammatory prey numbers reveals much about the frequency of such major-league kittens. Cats, of course, vary widely in their hunting skills:

“Hunting effort of house cats declines with age (Churcher and Lawton, 1987; Barrat, 1998), and records of prey brought in by individual young cats (e.g. George, 1974; Carss, 1995) are not representative of the total population of cats.

There is also a risk that findings from large surveys of prey brought home by house cats will be biased if people with cats that bring home many prey are more likely to participate than those whose cats bring home few prey. Also, as Barrat (1998) found in his large survey, most cats brought home few prey and just a few cats brought home many prey. With a highly positively skewed distribution such as this the median number of prey brought

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precedence over food consumption...the precedence of preying over eating may have the functional value of increasing food input by multiple kills if the opportunity arises” (Adamec (1976).

<sup>30</sup> The inference in Davis (1957) that cat predation directly suppressed rats is unsupported by Corrigan (2005), Childs (1986), and Elton (1953).

home per year is about half the mean value and better represents the predation by house cats.” (Fitzgerald and Turner 2000:171)

Certainly, no deep ecologist would take seriously the duly recorded observations of a small sample of lazy, ineffective hunting cats, let alone apply such results to a whole continent.

Crooks (1998) also referred to Coleman and Temple (unpublished data), which was probably some version of Coleman and Temple (1996). In that report, a simple mathematical formula generated “best guesses” of how bad cat predation could be. In an attempt to have Wisconsin’s free-roaming cats reclassified as an unprotected, huntable species, advocates relied in part on the Coleman and Temple projections (von Sternberg 2005). The researchers gave three possibilities by multiplying rural Wisconsin cat population estimates by yearly kill rates per cat (taken from unreferenced “other studies” or unpublished data) by percentages of bird kills between 20% and 30%. The result was a rather inexact predation spread of 7.8 to 219 million birds in Wisconsin alone. Problems with this research are discussed thoroughly by Goldstein et al. (2003), who are cat people; but lately even conservation biologists have commented that one-sided extrapolations like this are poor predictors of the overall impact of cats on prey:

“While a number of researchers have extrapolated kill rates from a few cats into huge estimates of prey killed by cats over large areas (e.g. free-ranging cats kill as many as 217 million birds/year in Wisconsin (Coleman, Temple, and Craven 1997) and 220 million prey/year in the UK (Woods et al., 2003)), these are rarely contrasted with similar estimates of potential prey populations over the same scales.” (Kays and DeWan 2004)

Crooks (1998) then discussed Churcher and Lawton (1987), a study of predation by the 78 cats of Felmersham, a 173-house English village situated in an area of “intensive arable farming” (where cats were probably recruited from barns where kittens would receive an early hunting education). Studying more than 5 cats was commendable, but again the results were not worthy of extrapolation to all of Britain as was done a year later by May (1988), especially since the majority of the United Kingdom’s cats probably live in London.<sup>31</sup> The study was an instant hit with American and Canadian anti-cat activists such as the Province of Alberta’s Gilbert Proulx, while Australian and British scientists were at once circumspect:

“Should pet cats be controlled? Before embarking, as Proulx (1988) suggests, on programmes to educate the public so that they will pressure elected officials to act on ‘cat delinquency’, we must discover what effect Domestic Cats really have on the wildlife populations in various urban localities –

not merely what effect we assume they have on the basis of prey brought home by Cats in one English village. Although we know what prey Cats bring home in a few urban localities, we do not know what effect this predation has on the prey populations, or how the wildlife populations might differ if Cat populations were reduced. Until we have this information, we cannot ensure sound educational programmes.” (Fitzgerald 1990:168-169)

Before moving on to his own San Diego “habitat islands”, Crooks (1998) discussed isolated oceanic islands. “Incredibly, 375 cats on Macquarie Island near Australia were able to kill an estimated 56,000 rabbits and 58,000 ground-nesting seabirds each year...” Since one of the reasons cats were put on Macquarie Island in the first place was to kill rabbits, also an introduced species (AAD 2006, Grossman 2008), Crooks might fairly have said, at least for rabbits, the cats were only doing their job. In fact, in 2000 when conservation biologists finally eliminated Macquarie Island’s cats, the number of rabbits and rats continued to grow in their absence. An initial improvement in survivability of some bird species has been followed by further declines as rabbits destroy vegetation, causing landslides, and rodents feed on chicks in their nests (AAD 2006, WWF 2007, Anonymous 2007b). The mathematical models of Courchamp et al. (1999) and Fan et al. (2005) predict such effects.

Crooks then gives the Conservation Biology version of the extinction of the Stephens Island wren:

“In the most infamous and perhaps most extreme example known, the lighthouse-keeper’s pet cat on Stephens Island, off the coast of New Zealand, arrived in 1894 and within one year completely exterminated the Stephens Island Wren.” (Crooks 1998)

But this description is incomplete and exaggerated. Stephens Island comprises an area of approximately 1 square mile. The Stephens Island wren (*Traversia lyalli*) was atypical, even for an oceanic island bird, being completely flightless (Millener 1989). It was semi-nocturnal, small, quick, and mouse-like (Galbreath and Brown 2004). Stephens Island held the last remnant of the species, which was widespread on the New Zealand mainland before being wiped out hundreds of years earlier by Pacific rats that probably came with the Maori people (Olliver 2005). A maximum of 17 specimens were ever collected on Stephens Island, and it is plausible all of them were brought in by the lighthouse-keeper’s cat. No one seriously considered reigning in “Tibbles”, as every bird brought home was literally worth its weight in gold to David Lyall, the lighthouse-keeper, and Henry Travers, a natural history dealer from Wellington, New Zealand. However, by 1895 there were also feral cats multiplying rapidly on the island. Predation by cats, not one cat, was probably the main factor in the extinction and was less the dramatic or “classic case” claimed by Diamond (1984) and others, occurring over several years and possibly up to 1899 (Galbreath and Brown 2004).

Scientists Fitzgerald and Turner summarize the differences between island and continental ecosystems: “Any bird populations on the continents that could not withstand these levels of predation from cats

<sup>31</sup> There are almost 6 million cat owners in the UK (1.28 million male, 4.7 million female), the majority of whom live in London (<http://www.cats.org.uk/media/facts.asp>); 41% of UK cat-owning households have 2 or more cats ([http://www.moggies.co.uk/articles/top\\_cities.html](http://www.moggies.co.uk/articles/top_cities.html)); in 2004, the total UK cat population was 9.58 million (<http://www.pfma.org.uk/overall/pet-population-figures-2.htm>).

and other predators would have disappeared long ago but populations of birds on oceanic islands have evolved in circumstances in which predation from mammalian predators was negligible and they, and other island vertebrates, are therefore particularly vulnerable to predation when cats have been introduced... In these circumstances, cats have had severe effects, that were often combined with the effects of other introduced mammals and habitat modification... Birds (both landbirds and seabirds) have been affected most by the introduction of cats to islands, but the impact is rarely well documented... There are few, if any studies apart from island ones, that actually demonstrate that cats have reduced bird populations.” (Fitzgerald and Turner 2000:170,171)

“In many cases the bird populations were not well described before cats were established and the possible role of other factors in changes in the bird populations are treated inadequately” (Fitzgerald 1988:142).

Predation by all introduced animals combined has caused 40% of the extinctions of birds on islands, according to (Mills 2007:160). As one of many such introduced species, cats were bad for islands historically, but what have they done lately? Conversely, coyotes ruined, almost overnight, the U.S. Fish and Wildlife Service’s painstaking and expensive captive-breeding / reintroduction effort for the critically endangered pygmy rabbit in Washington (Dovel 2007b), referred to by some as the “Columbia River Basin coyote feeding program” (Arbo 2007);<sup>32</sup> hybridization with coyotes is the biggest threat to persistence of the endangered red wolf (*Canis rufus*) (Mills 2007:52); coyotes have hybridized so extensively with the western Great Lakes grey wolf that only 31% of that “successfully recovered” species carries genetic material from the native version and none are purebred (Derr 2007);<sup>33</sup> and coyotes are the primary threat to one of the two subspecies of piping plover (see below).

Finally, Crooks philosophized about his own inconclusive research, and then ended with the observation that, encouragingly, 90% of his questionnaire respondents wanted coyotes in “neighboring natural areas” – presumably areas sufficiently distant from the “habitat islands” abutting their homes. This feature in ordinary people is called “compromise” – an attribute lacking among deep ecologists, and demonstrably absent in Crooks to even suggest coyotes for pet cat control.

### “Tabby” Tabloids – Sample Studies Post-Crooks and Soulé

Scientists can manipulate their raw data in ways that may or may not make a study more accurate. In Lepczyk et al. (2003), pro-Cats Indoors! researchers felt predation numbers provided by respondents living along breeding bird survey routes under-reported actual predation by

outdoor cats. Therefore, they chose to generate a wider range of estimated predation, which they did by assuming survey non-respondents had as many as 1.5 times the number of outdoor cats as survey respondents. Further, they assumed that respondents who reported their outdoor cats did not kill birds might have been mistaken, so they applied predation rates reported by other cat owners to the entire cat population. Finally, they attributed the lack of finding any extremely rare species, or species of state or national concern, in cats’ prey returns to various potential identification errors on the part of respondents.

Responsible scientists acknowledge the weaknesses of surveying, even if attempted in a straightforward way, over actual experimentation. These include the impossibility of knowing if the cats sampled match behaviours of the general cat population, and results not equating to the actual impact of cats on wildlife populations (Woods et al. 2003).

Like surveys, “natural experiments” can be difficult to interpret. Hawkins et al. (2004) conducted an investigation into the impact of managed feral cat colonies on wildlife. The researchers felt differences in their cat and no-cat site were unimportant, but human garbage sources and significantly more humans in the cat area of the park (53% versus 17% on major trails) may have undermined the experimental design. Nonetheless, they concluded fed feral cats change species composition of rodents by selective predation on native species, allowing competitive release of the house mouse (*Mus musculus*). Over a period of several years, such cats may function as “keystone modifiers” and cause substantial long-term changes in the entire biotic community.

On the European front, Beckerman et al. (2007) tried a new tactic. They modeled a scenario whereby daytime cats in the United Kingdom could stress out urban starlings and sparrows, thereby reducing fecundity and causing declines, even if actual predation is low. However, starlings and sparrows are described by others (along with cats, of course, and rats) as “the big Macs and Coca-Colas of the natural world...steadily invading the Earth’s ecosystems” (Holmes 1998). The fact that these birds thrive alongside cats, dogs, coyotes, raccoons, squirrels, people, vehicles, windows, and all other manner of daytime distractions almost everywhere else on the planet favours the normally proposed reasons for their urban UK declines.<sup>34</sup>

<sup>34</sup> For a more complete picture, the UK has one-tenth the cats of the U.S. (<http://www.pfma.org.uk/overall/pet-population-figures-2.htm>, APPMA 2005a) along with a human population of 60,776,238 (about one-fifth the population of the U.S., and double Canada’s), all housed on a land area slightly smaller than Oregon (CIA 2008). The UK’s human density of 639 people/mi<sup>2</sup> is about 8 times the United States’ 80 people/mi<sup>2</sup> and 70 times Canada’s 9 people/mi<sup>2</sup> (<http://www.worldatlas.com/aatlas/populations/ctydensity1.htm>), further densified (though not necessarily “EcoDensified”) into 14 principal cities with populations between 304,000 (Bradford) and 7.5 million (London) (<http://www.citypopulation.de/UK-Cities.html>). Canada, the U.S., and most countries in the world are not destined in the future to get close to these UK human concentrations (see United Nations 2004), which may contribute to the loss of nesting sites, reduction in insects, and subsequent Allee (underpopulation) effects commonly proposed (Beckerman et al. (2007) as testing the urban starling populations of manicured-lawn-loving Brits. Currently, around 30 countries do exceed the UK’s density, but 11 are “microstates” with areas between 0.4 mi<sup>2</sup> and 166 mi<sup>2</sup> (<http://www.worldatlas.com/aatlas/populations/ctydensity1.htm>).

<sup>32</sup> To substitute the word coyotes for cats in Crooks (1998): Even when prey reach dangerously low levels, coyotes will continue to hunt and kill.

<sup>33</sup> Showing that “rewilding” is more romantic than realistic, “restoration” does not re-create an earlier time.

## Cats and Creative Economics

The twin fields of Conservation Biology and Population Control attract a number of high-profile bug specialists<sup>35</sup> including Dr. David Pimentel, prolific expert / author of books and papers on a wide variety of non-insect-related topics.<sup>36</sup> Pimentel used creative economics to demonstrate U.S. environmental damage of \$14 billion (Pimentel et al. 1999) or \$17 billion (Pimentel et al. 2000) per year caused by cats. In contrast, USDA APHIS Wildlife Services listed reported actual damage by feral cats from complaints this agency received in 46 states as totalling \$54,192 for 8 years from fiscal 1990 to 1997 (Bergman et al. 2002), but they recognize this to be an underestimate of actual feral cat damage to natural resources, particularly to native birds.

To achieve his results, Pimentel assigned a value of \$30 to every bird in the United States “based on the facts that a bird watcher spends \$0.40 per bird observed, a hunter spends \$216 per bird shot (USFWS 1988), and ornithologists spend \$800 per bird reared for release (Tinney 1981)” (Pimentel et al. 2000). He then multiplied the \$30 by 465 million or 568 million songbirds that American cats might kill per year. The birds killed were presumably only good native species, since Pimentel gave the cats no rebate for doing away with any destructive native species or any of the invasive birds his report also estimated as causing billions in damage per year. In addition, there is strong evidence that when cats kill birds, they take the weak and sick (Møller and Erritzøe 2000) and that urban areas are filled with songbirds of inferior body condition (Shochat 2004). Accordingly, and especially since most domestic and feral cats are urban (Hartwell 2003, Shochat 2004),<sup>37</sup> further sizeable discounts off the \$30 for a huge percentage of Pimentel’s hypothetically depredated birds are in order.

Rats were the only invasive species Pimentel found to cause more damage than cats (\$19 billion per year). Since nest success is the key to reproductive success for birds (Patten and Bolger 2003); since rats, unlike cats, are extensive nest predators,<sup>38</sup> and since cats prey on 3.5 small mammals for every bird,<sup>39</sup> then Pimentel’s model

<sup>35</sup> Some high profile entomologists / population control advocates include Paul Ehrlich; Edward O. Wilson, inventor of the “biophilia hypothesis” (later writing a book by the same name with Human Dimensions expert Stephen R. Kellert); and Thomas Lovejoy, early president, Society for Conservation Biology.

<sup>36</sup> David Pimentel is perhaps most famous for his part in the 2004 attempted takeover of the Sierra Club Board of Directors on an anti-immigration platform so close to positions held by white supremacists that racist organizations encouraged their members to join the Sierra Club en masse in order to vote for the Pimentel team (see Rosenfeld 2004).

<sup>37</sup> Australia also has feral “bush cats”, which are found in more remote areas (Hartwell 2003).

<sup>38</sup> Whisson et al. (2004), for example, showed roof rats (*Rattus rattus*) to be abundant and the most common predators of songbird nests in riparian forests in California’s Central Valley. Pimentel did mention rat predation on birds, eggs, and other native species, but did not assign \$30 or any value to this prey or include its loss in the rat calculation, only costing out destruction of stored grains and other materials.

<sup>39</sup> Cat predation on small mammals, birds, and other prey occurs at a ratio of about 7:2:1: Dietary studies of cats show on average 69% frequency of occurrence of mammal remains in guts or scats and 21% bird remains. Studies of prey brought home show mammals to form 64-85% of vertebrate prey and

should have considered additional cash back to cats for potential rat removal.

## Objective Experimentation – A Refreshing Approach

Recent mechanistic, objective experimentation has failed to implicate cats in negative impacts on birds. In Tennessee, Haskell et al. (2001) found the total number of predators rose with housing density, but the probability of predation on artificial nests baited with quail eggs did not change and was correlated with raccoon and American crow presence, but not cats. The researchers concluded quail eggs might not be appropriate for studying rates of predation on eggs and nestlings but that management recommendations based on tentative assumptions that urbanization does increase predation should be interpreted cautiously.

In a Florida scrub jay study, Bowman and Woolfenden (2001) discovered egg predation decreased but nestling predation increased in suburban compared to wildland areas with no change in nest success overall. Suburban eggs hatched earlier, coinciding with increased predator activity; however, the predators singled out were not cats but birds (including other scrub jays), foxes, raccoons, and black rats.

Analysis of “My Yard Counts” data in the eastern U.S. showed, “Of all birds reported killed by cats in our study, most have stable or increasing populations, and only one species (Eastern Towhee) is of conservation concern” (Cooper 2007).

Six out of 8 recent studies using miniature video camera monitoring have identified snakes (relative to groups such as mammals or birds) as the most important “edge effect” of New World open-nesting passerine birds, accounting for up to 90% of all nest predation (Weatherhead and Blouin-Demers 2004).

Arizona researchers discuss paradoxical urban influences:

“Compared with adjacent wildlands, cities are characterized by higher bird population densities and lower species diversity (Marzluff 2001). Two major factors have been suggested to explain the increase in densities: a bottom-up effect (the increase in food abundance) and a top-down effect (a decrease in predation). Interestingly, both factors are paradoxical. While food may be more abundant at the population level (Marzluff 2001), it may be scarce at the individual level due to high competition (Sol et al. 1998). While domestic predators may be highly abundant in cities (Sorace 2002), their effects on prey behaviour or nest mortality may be negligible (Bowers and Breland 1996, Gering and Blair 1999)... I suggest that the high predictability of food availability changes foraging behaviour and consequently decision making on trade-offs between clutch size and nestling body condition. This, in turn, results in an increase in bird densities and may change not only population dynamics, but also community structure and species diversity.” (Shochat 2004:622)

birds 15-36%. Reptiles can be important prey in some places. Invertebrates, mainly insects, are recorded frequently (Fitzgerald and Turner 2000:164-165).

“The inflated densities and tame behavior of urban birds suggest that there is little empirical support for the hypothesis that predation pressure in the urban environment is high and that estimating predation risk based on predator density alone can be misleading.” (Shochat et al. 2006)

Shochat et al. (2006) think contemporary urban bird communities might represent the “ghost of predation past” where species unaffected by predation from “cats and corvids”<sup>40</sup> thrive and others have disappeared, yet cats are not a primary threat even to metrophobic birds of concern.

### Cats and Species at Risk

A review of Canada’s Species at Risk website (Environment Canada 2006a) and Public Registry (see [http://www.sararegistry.gc.ca/species/default\\_e.cfm](http://www.sararegistry.gc.ca/species/default_e.cfm)) shows predation, but not by cats, to be the primary threat to only 1 of this country’s 70 birds of concern; that is, Northern Great Plains populations of the *circumcinctus* subspecies of piping plover (*Charadrius melodus*). Coyotes are among confirmed egg predators (along with domestic dogs, minks, raccoons, and many birds); coyotes, minks, and birds of prey are confirmed chick predators; and coyotes are potential predators of adults (along with foxes, raccoons, badgers, skunks, owls, crows, and hawks). Predator control techniques include “exclosures,” electric predator fences, and strobe lights to reduce egg predation; direct predator removal; raptor nest removal to reduce adult plover mortality; and predator deterrents to discourage breeding gulls (Environment Canada 2006b:9, 10,11,20). In short, Canada’s recovery strategy for *Charadrius melodus circumcinctus* does not speak of cats at all.

The other subspecies of piping plover (*Charadrius melodus melodus*) breeds along the Atlantic coast where the most important limiting factor is loss of habitat, caused mostly by human disturbance around nests. One part of human disturbance is the garbage of beach-going picnickers attracting predators including crows, gulls, foxes, raccoons, and feral dogs and cats (Environment Canada 2006a). A U.S. Fish and Wildlife Service publication (USFWS 2006) informs the public about the dangers of dogs and cats on beaches and directs readers to the American Bird Conservancy’s Cats Indoors! website where literature (see especially Winter and Wallace 2006) gives the distorted impression that cats are the most serious predator of the piping plover and other ground-nesting birds.<sup>41</sup> However, as in Canada, the United States piping plover recovery plan is not obsessed with dogs and cats. It stresses leashing of dogs on plover nesting beaches, and feral cats have been trapped and removed at some locations. Redressing environmental and human-abetted factors that change / increase types / numbers of predators is encouraged where feasible; but this relates,

again, to the whole range of mostly wild predators, bird and mammal, that benefit from the presence of humans. Moreover, the U.S. program states “policies that prohibit management of native predator populations even when human-abetted factors have caused substantial increases in their natural abundance may be counter-productive to the overall goal of protecting ‘natural’ ecosystems” (USFWS 1996).

While well-fed cats may or may not hunt, perhaps here is a case where an animal’s hunger determines perseverance: in U.S. predator deterrent assessments regarding piping plovers, “Foxes or coyotes systematically depredated 5-10 exclosures at each of three widely separated sites in 1995 (USFWS files)” (USFWS 1996: Recovery Tasks), although the method used to identify these canids is not disclosed. Winter and Wallace (2006) cite numerous reports of cat tracks found near or around piping plover exclosures in various parks and recreation areas as confirmation of cats as the cause of piping plover nest predation / abandonment / failure, but inferring predator identity from such circumstantial evidence is not always a reliable approach (Larivière 1999, cited in Environment Canada 2006b). In one case described by Winter and Wallace (2006), a cat and kittens were caught red-handed in New York with the remains of 17 common terns, but most accounts of nest remains are as or more consistent with predation by other animals.

Primary limiting factors for the other Canadian birds at risk range from deforestation to fire-suppression, overgrazing livestock to undergrazing livestock, and loss of natural habitat to loss of human-built structures; but cats, dogs, and coyotes sometimes receive attention as secondary threats. Coyote and “mesopredator” predation often go together, further lack of proof for the coyote as a “mesopredator”-reducing keystone species. At the very least, coyote predation on endangered birds and eggs in these systems raises the “strong reasons” given by Crooks (1998) for conservationists to support, not oppose, the control of large carnivores.

The 6 birds in Canada, other than piping plovers, for which coyotes and cats together are among suspected or known predators, are: a subspecies of the greater sage-grouse (*Centrocercus urophasianus phaios*) (a game bird extirpated from British Columbia; other named predators are golden eagles, bobcats, and weasels); the northern bobwhite (*Colinus virginianus*) (endangered in Canada but globally secure; skunks, foxes, owls, raccoons, dogs, and snakes are also noted as predators); a subspecies of the horned lark (*Eremophila alpestris strigata*) (endangered, though it was never abundant; studies cited in support of the cat’s inclusion are George (1974) and Coleman and Temple, unpublished data, this time teaming up with S. R. Craven, a Human Dimensions guy) (Coleman et al. 1997); the endangered burrowing owl (*Athene cunicularia*) (known heavy predation in B.C. by coyotes, northern harriers, and great horned owls; elsewhere by raptors and badgers, and cats and dogs are reported as a threat in human areas); the endangered roseate tern (*Sterna dougallii*) (also vulnerable to numerous avian predators in addition to dogs, foxes, and other mammals; and ants); the threatened common night-hawk (*Chordeiles minor*) (also having numerous avian

<sup>40</sup> Examples of corvids are crows, jays, magpies, and ravens.

<sup>41</sup> Even the American Bird Conservancy’s recent Top 20 Critical Habitats Report mentions cats only 3 times beyond discussion of coastal beach and marsh piping plover habitat, all in reference to islands (Californian Channel Islands, Hawaii, Guam) and in conjunction with the other introduced predators found there (ABC 2007:35,44,45,47).

predators from hawks to crows; other listed predators are striped skunks, raccoons, dogs, foxes, and snakes).

Coyotes, without cats, are singled out as a threat to 3 birds: the whooping crane (*Grus americana*) (endangered though historically never common to Canada); the endangered greater sage-grouse (*Centrocercus urophasianus urophasianus*) (predator contribution unknown, but in Alberta, coyote numbers increased 135% between 1977-1989 and 1995-1996); the long-billed curlew (*Numenius americanus*) (a bird of special concern; habitat fragmentation creates easier access by predators, primarily increasing numbers of coyotes).

The 4 birds for which descriptions specifically mention cats, but not coyotes, among predators are: an endangered subspecies of the Vesper sparrow (*Pooecetes gramineus affinis*) (its only Canadian population consists of about 5 pairs at the Nanaimo Airport, where domestic and feral cats have been observed; proven nest predators, however, are American crows and garter snakes – there are no coyotes on Vancouver Island); the threatened short-tailed albatross (*Phoebastria albatrus*) (cats used to live on its Japanese island breeding grounds, rats still do, but volcanic eruptions and longline fishing are its known primary threats); the yellow rail (*Coturnicops noveboracensis*) (a bird of special concern; in 1980 a radio-tracked yellow rail was caught by a house cat in Indiana); and the Bicknell's thrush (*Catharus bicknelli*) (a bird of special concern not in decline presently, but an unpublished manuscript in 1939 suggests the Seal Island population, off the coast of Nova Scotia, may have been devastated by ravens and crows, feral cats, and introduced squirrels).

A preliminary, more detailed review of the science supporting each of the above pronouncements on predator threats to birds reveals the cat claims to be based on anecdotal evidence and speculation, while the coyote claims are based on actual experiments. Lately, infrared video-monitoring is proving invaluable in acquitting cats and convicting coyotes.<sup>42</sup>

Cats are not named as the threat or reason for designation of any of the (very few) red, blue, or yellow-listed vertebrates in the GVRD, where the City of Vancouver is located (Ministry of Environment 2008). Based on the general habitat locations and known threats to species at risk, there is no justification for a far-reaching Cats Indoors! policy. The coyote population explosion deserves far more attention than predictable pet demographics and easily relocated, self-contained feral cat colonies that can be addressed in the limited situations where legitimate evidence shows a definitive need.

### Science or Superstition?

The popular media often reports biased science, misreports fair science, or quotes the speculation of “experts” as indisputable fact. A Cats Indoors! message is frequently disguised as objective journalism. Langton (2005) is a perfect example of all these components rolled into one full-page “special to the Star” article in Toronto.

<sup>42</sup> For example, see Rader et al. (2007), where 83% of all bobwhite nest depredation events in Texas were caused by 4 species: coyote, striped skunk (*Mephitis mephitis*), southern fire ant (*Solenopsis xyloni*), and badger (*Taxidea taxus*).

Treating urban wildlife rehabilitators as environmental experts is especially phony, as this field is arguably a specialized branch of the animal rights movement.

Catastrophic cats have media sensation value. A lone voice in a sea of cataclysm is largely ignored, like Vancouver columnist Milstein (2005), quoting the Royal Society for the Protection of Birds that “threatened species are not the ones hunted [by cats] and the ones hunted are not decreasing in number.” Environmentalist-based anti-cat statements in the mainstream media are the pop culture equivalent of superstitions promoted by the mediaeval Church and may incite the same sorts of abuse.

Similarly, science and medical journals publish studies that report a risk more than studies that report no risk (publication bias), and scientists frequently cite studies with strong results over more rigorous ones with less interesting conclusions (citation bias) (Milloy 2001:44-45). Conservation Biology’s monopoly over North American environmentalism adds politics to publication bias. While any journal might print an anti-cat piece, it would be shocking to see a pro-cat or even cat-neutral study appear in *Conservation Biology*. The critique of the “mesopredator release hypothesis” by Patten and Bolger (2003) was accepted for publication in *Oikos*, a journal headquartered in Lund, Sweden. Likewise, Kays and DeWan (2004), the study where indoor-outdoor hunting cats had no impact on wildlife at a New York nature preserve,<sup>43</sup> was published in *Animal Conservation*, the Zoological Society of London journal. *Behavioral Ecology*, an international journal based in Australia, published Gehrt and Prange (2007), which failed to support two predictions of the “mesopredator release hypothesis”. With the exception of the chapters in Marzluff et al. (2001), wherein the emerging field of Mechanistic Ecology seeks greater rigour and a more cautious interpretation than that motivated by advocacy science, the non-inflammatory-to-cats studies appearing throughout this submission all come from journals headquartered outside America, even though much of the research took place on this continent. In addition to the three above, these are *Oecologia*, *Trends in Ecology and Evolution*, *Journal of Avian Biology*, *Journal of Animal Ecology*, *Environmental Conservation*, and *Notornis*.

Some everyday human causes of bird mortality are collisions with structures and equipment, poisoning by pesticides and contaminants, electrocution, introduced diseases, poorly maintained backyard feeders that concentrate birds and increase the opportunity for disease transmission, entrapment, entanglement, shooting, children playing in yards, and dogs (USFWS 2002, Burton and Doblar 2004). The highest estimates by the U.S. Fish and Wildlife Service for birds lost to human causes (excluding cats and habitat loss / degradation for which no figures are supplied) add up to over 1.334 billion birds per year. In 1956, an estimated 5.6 billion birds

<sup>43</sup> While Kays and DeWan acknowledged this might in part be due to Crooks and Soulé (1999) type deterrence exerted by healthy populations of cat predators like coyotes and fishers, they also hypothesized, perhaps more impressed by their actual observations of cats than the religious pronouncements of Soulé, “that the more care a cat receives from humans the less likely it is to affect prey populations through hunting because it is less driven by hunger” (Kays and DeWan 2004:10).

lived in the U.S. in the summer, 3.75 billion in the winter (Terres 1995); but the U.S. Fish and Wildlife Service now gives estimates of 10 to 20 billion birds that breed in North America (USFWS 2002). In Canada “the number of songbirds is estimated to be in the billions” (CWF 2004). Canada has a tenth the human population of the U.S., and thus a tenth the density of human-associated cats. Therefore, it would be fair to divide Pimentel’s top cat predation number, which is extraordinarily high (for some problems with cat predation estimates, see Clifton 2003) by 10, for 56.8 million songbirds killed per year by Canadian cats. If “in the billions” means Canada has only 2 billion songbirds, then the worst-case scenario for Canada is that cats kill 2.84% of the total songbird population per year. If the other 8 to 18 billion birds live in the more temperate U.S., then the American worst-case result for cat predation is between 3% and 6%.

For added context, it is normal for songbird species to undergo excessive mortality and still maintain healthy populations. “At a population level, the death of prey individuals, no matter how massive or macabre it may seem to us, does not necessarily result in a smaller prey population; consider that roughly one-third to one-half of all bird nests are destroyed by predators, but the decline of bird populations following such predation is certainly not inevitable” (Mills 2007:162). The “doomed surplus” aspect of prey mortality is described by Showler (2002) specifically in the context of cats and birds: “In general it would appear that cat predation results in compensatory mortality rather than additive mortality; i.e. birds taken by cats would have died anyway by some other means.” But, anti-cat activists get around this problematic reality by weaving their old standby “precautionary principle” into nebulous speculation, as this Florida “Feral Cat Issue Team” paper demonstrates:

“Cats undoubtedly kill millions of animals and potentially this predation is additive to other sources of mortality, such as disease, and thus represents a significant impact to wildlife populations. Conversely, for some prey species, it is also possible that predation by cats is largely compensatory, such that most animals killed by cats would likely be killed by other sources. Because the impact of cat predation varies among species and local areas and because local data is typically lacking, the conservative assumption regarding any local population should be that cat predation is a significant mortality factor that should be minimized.” (Wallace and Ellis 2003)

Notwithstanding politics and media-induced hype and superstition, other scientists plug away in the background on the real issues. Abstracts on urban bird ecology from the North American Ornithological Conference, 2006 do not even mention cats. In the conference’s entire 392-page book of all, not just urban, abstracts (see [http://www.osnabirds.org/naoc2006/files/naoc2006\\_absbk.pdf](http://www.osnabirds.org/naoc2006/files/naoc2006_absbk.pdf)), the word “cats” appears twice: once to say they weren’t present in a Mexican study site, and once in relation to the use of landbird population estimates for, among other purposes, assessment of the impacts of various mortality factors (including cats) on populations.

## ARBITRARY AND CAPRICIOUS MANAGEMENT

Cats and coyotes have some things in common. Neither could be called a fragile species. The coyote is one of the few “old fauna” large mammals of North America to have survived the last Ice Age (Geist and McTaggart-Cowan 1995:107) and thrives despite being killed by humans for over a century to reduce their predation on livestock. Cats have survived persecution throughout millennia, as now. Both are predators that can breed “with the fecundity of a prey species” (Clifton 2003). Both, not just cats, qualify as “mesopredators” because researchers often call coyotes “large carnivores”, but public education on “coexistence” always stresses their small size and weight. Both are opportunistic hunters that exhibit predatory behaviour in the absence of hunger (e.g., Leyhausen 1988, Baker and Timm 1998, Andelt et al. 1980). Coyotes are as “invasive” beyond their historical western plains habitat as “exotic” cats brought on ships from Europe. Both might be “indicator species” of “post-Columbian” disruption – coyotes benefiting from habitat modification, possibly wolf control, and even transport by humans<sup>44</sup> to increase their range and numbers; cats being welcomed alongside the modifiers as pets and mousers. But the similarities end there.

Environmentalists contend a coyote killing a cat is no worse than a cat killing a songbird. This ignores the fact that cats are not wildlife. Cats are family members and, like people, valued for their individuality. Coyotes, and songbirds, are wildlife for which most ecologists say the health of populations, not individuals, matters. Using the environmentalist proposition above, coyotes killing children would be no worse than little boys with pellet guns killing songbirds. It is a mistake to be deluded by those who speak of coyotes, birds, and family members using the terminology of environmentalism. It doesn’t matter how “natural” coyote predation on small and/or furry family members might be. Rape is “natural” too, according to some anthropologists (Thornhill and Palmer 2000, Wrangham and Peterson 1996), but even they do not conclude offenders should be exonerated and all the daughters locked indoors.

Deep ecologists and animal rights activists might respond that the whole pet-as-family-member idea is a biophilically misdirected Western normative aberration arising from an equally tragic transformation of hunter-gatherer societies to farming from the Neolithic onwards (see Kellert and Wilson 1998, Diamond 1987). But even if it is bad to adore pets, environmentalists still cannot explain why predation is “natural” by coyotes on cats but not by humans on coyotes. Indeed, predator control by humans is part of our desirable Stone Age heritage. Killing of wildlife for self-defence and the protection of property, which includes pets and livestock, is one of the basic tenets of the 5-point North American wildlife conservation model that Geist (1995:8,79-81) describes as “an exemplary system of ‘sustainable development’ ...the greatest environmental success story of the 20<sup>th</sup> century,” and a system with aboriginal qualities. But the authorities

<sup>44</sup> There are at least 18 recorded intentional releases of coyotes in the southeastern U.S.; releases or escapees are also documented in Maine, New York, New Jersey, and Pennsylvania (Gompper 2002:10).



entrusted to protect urban-ites, who have left their own guns at the gates of the city, have opted instead to protect “dangerous wildlife” (the classification of coyotes in the B.C. Wildlife Act 1996). This reckless arbitrary and capricious management prioritizes the city-planning vision of deep ecologists and bows to the whims of those who openly wish humanity drastically reduced or dead.<sup>45</sup> In densely populated human habitats where discharging firearms is illegal, “coexistence” is arguably an infringement of Section 7 of the *Canadian Charter of Rights and Freedoms*.<sup>46</sup>

Beyond the boundaries and ethical debates of suburbia, there is nothing controversial about shooting and trapping coyotes. In most of North America, it is a free-for-all. In B.C., based on the sound conservation practices Dr. Geist refers to, there are no bag limits (only Skeena Region still has a 10-coyote-per-hunter take), open seasons that lengthen yearly (a sign of rising predator populations), and no reporting conditions to make it even easier (Ministry of Environment 2008a). But current levels of sports hunters cannot possibly control burgeoning coyote populations. The provincial government wants to recruit an additional 20,000 registered hunters to reverse the “dramatic downturn” in hunting of the past 20 years (Payton and Carrigg 2007) that has coincided with the growth of wildlife populations and dramatic increase in their conflicts with humans (MWLAP 2003:3,4).

#### **IF YOU BUILD IT, THEY WILL COME – AN ANNOTATED HISTORY OF “CO-EXISTING WITH COYOTES”**

In the mid-1990s, 52% of 184 randomly sampled GVRD residents (from a population of 2 million) were “neutral” about coyotes. Their attitudes were based on “a lack of knowledge, experience, or concerns about coyotes.”<sup>47</sup> Another 27% had “positive” attitudes toward coyotes based on emotions and misconceptions.<sup>48</sup> The other 21% were “negative” toward coyotes based on emotions intermingled with accurate perceptions.<sup>49</sup> Two other groups (veterinary clients and naturalists) showed a somewhat higher percentage of “positive” feelings; but these responses were obtained by voluntary sampling, inviting bias and devaluing meaningful interpretation. As coyotes were so new to the area, all groups failed or

<sup>45</sup> The Voluntary Human Extinction Movement (<http://www.vhemt.org/>) most openly promotes this broadly-held environmentalist view.

<sup>46</sup> “Every one has the right to life, liberty, and security of the person and the right not to be deprived thereof except in accordance with the principles of fundamental justice.” (Section 7, *Canadian Charter of Rights and Freedoms*)

<sup>47</sup> “When asked to expand on their reasons, neutral attitudes were often associated with a lack of knowledge or experience with coyotes; people said they ‘hadn’t had a problem’, they felt that coyotes were too costly to remove, or it was the individual’s own responsibility for their pet’s safety.” People “were often insistent that coyotes were not present in their respective neighbourhoods” (Webber 1997:28, 39, 48).

<sup>48</sup> “Positive attitudes were associated with particular perceptions about coyotes such as coyotes: being a natural part of the ecosystem; being important for rodent control; improving the quality of life for GVRD residents; and ‘deserving’ to be in cities because humans have taken over their natural habitat” and being an “esthetic resource” (Webber 1997:28, 39)

<sup>49</sup> “Those with negative attitudes expressed concerns for pets, concerns about human safety, suspected the loss of a pet, perceived that coyote populations were ‘out of control’, that coyotes were ‘savage killers’ or that coyotes ‘don’t belong’ in an urban environment.” (Webber 1997:28)

barely passed a basic-knowledge “Coyote Awareness Index” (Webber 1997:17,20,28,39,40,48). Respondents were more or less empty vessels primed for “education”.

This section recounts the history and politics leading to Vancouver’s “Co-existing with Coyotes” program. Until regular North Americans, the silent majority, unite to halt the momentum set rolling here, no other city’s pro-predator activists will have to work this hard to ensure stray coyotes<sup>50</sup> take precedence over people and pets.

Between 1985 and 1995, there was a 315% increase in coyote-related complaints within the Greater Vancouver Regional District (City of Vancouver 1995a) mostly from urban and suburban residents (Webber 1997). In September 1993, Vancouver City Councillor Price (a leader in environmentally efficient urban planning) (Lloyd 2003) requested a report on what could be done to address the coyote problem in the Southlands area. City staff had also received complaints about other animals, such as skunks and raccoons, and concluded many different government departments and private agencies that worked with urban wildlife needed to be involved:

“It is increasingly important that all groups be effectively coordinated, especially when dealing with problem situations. New information needs to be shared so that all groups may work cooperatively. In September, 1993, an introductory urban wildlife meeting was held at Stanley Park to identify interested participants and consider a coordinated approach.” (City of Vancouver 1994a)

There is no indication of any private citizens whose stake was the safety of pets attending the initial meeting. It does not appear that the City of Vancouver or Park Board extended public invitations. From this meeting, the “Urban Wildlife Management Committee” was formed, with representatives from three levels of government (the Canadian Wildlife Service, B.C. Ministry of Environment, and the City of Vancouver) and NGOs seemingly as diverse as the BC Society for the Prevention of Cruelty to Animals (BCSPCA) and BC Humane Education Society, Stanley Park Zoological Society, Vancouver Aquarium, Wildlife Rescue Association, Monika’s Wildlife Shelter, Critter Care, Urban Pest Management Association, and Urban Wildlife Management Inc. The co-chairs of the new committee were Stephen Huddart of the BC Humane Education Society and Mike Mackintosh of the Vancouver Park Board. Mike Mackintosh, a career urban environmentalist, had affiliations with several of the other groups and the government bodies.<sup>51</sup>

“The Committee’s main purposes are to develop an effective education program promoting better understanding and appreciation of urban wildlife. The Committee recognizes the fundamental value and enjoyment of living with wildlife.” (City of

<sup>50</sup> I define “stray coyote” in the same way “stray cat” is defined by Hawkins et al. (2004:165) as “one that relies partly on humans for provision of its ecological requirements such as food or shelter, provided intentionally or otherwise.” Stray coyotes and other wild canids in city limits are best treated per feral dog protocol.

<sup>51</sup> Mike Mackintosh, Vancouver Park Board employee and oft-quoted Vancouver wildlife advocate, was a founder of the Stanley Park Ecology Society and Stanley Park Zoological Society and ran the Stanley Park Zoo with a new wildlife conservation focus before its dismantling (SPES *no date*).

Vancouver 1994a)

But, only the hardest-core environmentalists might find “enjoyment” in watching a coyote strangle a cat during a round of golf or a walk to nursery school.

“There are many ways to encourage and provide for species to enable them to live harmoniously with city dwellers. (Backyard sanctuary programs, creative landscaping are examples)” (City of Vancouver 1994a).

These ideas were developed in the coming years, and today Environment Canada, the Ministry of Environment, and the Province of British Columbia officially facilitate the free flow of coyotes into urban areas by funding Naturescape. This program (the “Urban Wildlife Committee” is still a supporting partner in Vancouver) encourages people to start the “rewilding” process in their own backyards:

“Naturescape British Columbia empowers private citizens to end the loss of habitat and to create green spaces for wild creatures in urban and rural communities. Imagine the transformation of urban and populated rural areas as private yards and community areas are naturalized by you, neighbors, friends, and community groups. Habitat yards will link together and areas of wildlife habitat in adjacent neighbourhoods will become connected. Over the years, a patchwork quilt of wildlife habitat will extend across entire communities.” (Naturescape 2007)

The committee would be a source of public information and advice, review existing urban wildlife control measures, and explore new methods of working with problem wildlife. “Problem wildlife can be defined as species that are over-abundant and threaten the existence of sensitive native species, cause habitat destruction or degradation, threaten human health by transmission of disease or parasites and cause property destruction” (City of Vancouver 1994a). The committee would review programs in other localities and examine innovative approaches to “enhancement and control”. Four subcommittees were formed: Health, to examine “human medical hazards”; Education, to develop “programs stressing responsible attitudes and appreciation of local wildlife”; Media Relations, to provide “effective public information about urban wildlife”; and Legislative, to examine “issues of wildlife and the law”. The committee was to meet every 4 to 6 weeks, with specialists in wildlife management to present their findings at upcoming sessions.

“The primary objective of the Committee is to convey positive messages about the roles wildlife can play in our lives. The Committee is well qualified to make recommendations regarding urban wildlife issues, and can be considered as a source of information, should Council require assistance. The problems related to coyotes, raccoons and skunks will be reviewed, and a more extensive report on the Committee’s activities will be prepared for 1995.” (City of Vancouver 1994a)

The issue at hand of the peril of coyotes to people and pets was suddenly downsized, with dangerous wildlife now in the same category as skunks and

raccoons. The committee’s own preferences, in the absence of urban pet owners, the “vocal few”, allowed this shift in objectives.

The BCSPCA was on the committee, and it seems logical, based on the historical purpose of humane societies to protect domestic animals,<sup>52</sup> that it would have been the defender of cats. However, cats are a tremendous drain on the resources of animal shelters (Basur 1998). Although the SPCA does much that is good, it is unlikely its representative under the old regime was oblivious to the potential benefits of coyote predation. Fewer lost or stray cats would be brought to the shelter together with higher adoption rates to replace owned cats that disappeared. The coyote presence in Vancouver could not but help out the SPCA, both financially and from the public relations angle, by furtively doing the dirty work of cat extermination for them. Urban coyotes may partly explain how the BCSPCA was able to convert to a no-kill, or at least limited-kill, philosophy in 2002 after previously needing to euthanize thousands of pets yearly in the Lower Mainland (O’Connor 2004), though in 2004 two workers still described their respective BCSPCA shelters as “Auschwitz” (Yaffe 2004a).<sup>53</sup>

Some on City Council were apparently irritated by the relaxed pace of the “Urban Wildlife Management Committee” while their constituents’ cats were being decimated. Councillor Puil asked the City Manager to expedite a report outlining steps to capture coyotes in the city for release in a wilderness area. A presentation to Council in May 1994 was summarized in a September 2 report (City of Vancouver 1994b) wherein the committee reaffirmed its original pro-coyote position. All ideas for removal were rejected as impossible; or if possible, not feasible or too expensive; or if feasible and inexpensive, then unsafe in urban settings. Puil later would be described by Webber (1997:38-39) as having attitudes that “should be seen as educational opportunities, underscoring the need for ‘environmental literacy’.”<sup>54</sup>

The presentation waffled back and forth between statements about the difficulty of removing coyotes and the undesirability of doing so anyway. “Programs to control coyotes may be difficult to carry out in large urban areas. Some of the techniques considered are hazardous to public safety and can be dangerous to domestic animals” (City of Vancouver 1994b). Not surprisingly, poison was not a good option. Shooting also presented additional public hazards and had “met with extremely negative reaction” (City of Vancouver 1994b). Live trapping didn’t work; however, “One effective method of capture may involve the use of soft leg-hold traps which are designed to catch animals without

<sup>52</sup> But the BCSPCA is now in the wildlife rehabilitation business too (BCSPCA 2005a); helping predators get back on the street is clearly a conflict of interest with the welfare of pets.

<sup>53</sup> In 2002, the BCSPCA also officially approved managed feral cat colonies (<http://www.animaladvocates.com/cgi-bin/newsroom.pl/noframes/read/11074>), and many cats now avert shelter death row because of groups like Vancouver Orphan Kitten Rescue Association (VOKRA) but definitely face coyote predation instead (Makuch 2008).

<sup>54</sup> Webber went on to portray Puil as grey and ignorant in the “Urban Coyote Project” video (Delta Cable Communications, Ltd. 5381 48th Ave., Delta, B.C., Canada V4K 1W7).

physical injury.” But this was a false ray of hope: “Leg-hold traps, safe or not, are likely to be opposed publicly. Domestic animals may also be caught if the traps are not closely observed. Even if successful, the translocation of coyotes is not considered by experts to be a viable solution. Therefore, any live trapped animals would likely be euthanized.” (City of Vancouver 1994b)

The B.C. Trappers Association had been in existence since 1945, the B.C. Wildlife Federation since 1951,<sup>55</sup> but the experts claimed:

“Presently there are no organizations in Vancouver capable of dealing with coyote removals other than in extreme circumstances. The Urban Wildlife Committee has been reviewing the procedures used in other cities and districts for coyote control. At this point, no city has successfully resolved the urban coyote situation.” (City of Vancouver 1994b)

### **Let’s Play the “Vermin” Shell Game, Part 1 – Coyote, Cats, and Rats**

“Some local wildlife contractors would provide assistance to the public where possible” (City of Vancouver 1994b), but public use of such services would be environmentally and socially perilous:

“In their role as efficient predators of rats and other rodents, coyotes can be beneficial to the human environment. A program of systematic removal of these animals will be controversial as many city residents perceive coyotes as urban wildlife which occupy an important natural role.” (City of Vancouver 1994b)

The “many city residents” referred to may have consisted of few more than the group members themselves. The “natural role” was perception only in an area previously coyote-free; and it was premature to suggest Vancouver coyotes were controlling, or even catching, “rats and other rodents”. Timothy Quinn’s thesis on urban coyotes, just across the border in northwestern Washington, was published in 1992. His scat analysis showed squirrels to make up about 12% of prey occurring in scat at one urban-adjacent site and 6% at the other. Few other rodents were identified beyond the 4.4% voles (field mice) at urban site 1 and 2.9% at urban site 2 (compared to 41.5% and 5.6% at rural sites). Rats were not noted at all; and mice at <1% did not merit a bar on the graph. The “other mammal” category was an assortment of small-contribution species like beaver, raccoon, opossum, chipmunk, rabbit, porcupine, skunk, deer, cow, dog, and “unknown”.

Instead of “rats and other rodents”, Quinn found cats to be the most important coyote food at urban site 1 (22.7% frequency of occurrence) and well represented at urban site 2 (9.2%). Apples were the second highest food source after cats at urban site 1 (15%) but were consumed much more at urban site 2 (34.6%). All fruit combined edged out the consumption of cats at urban site 1 (Quinn

1992:65-66). Quinn (1992:95) viewed as beneficial the high dietary frequency of cats he did discover, referencing Soulé et al. (1988) and, as is the custom among many coyote researchers, suggesting predation on people’s cats might help the songbirds.

The no-rats-but-lots-of-cats findings in Quinn (1992) were supported by other studies then available but conducted in less similar climes (e.g., Shargo 1988:49, 50). So it was sheer unsubstantiated wishful thinking on the part of the “Urban Wildlife Management Committee” to suggest coyotes, erstwhile “vermin”, should take over rat control from cats, valued since antiquity for this function (Serpell 2000:191). If the “Urban Wildlife Management Committee” had been truly concerned about invasive rodents, then more cats, not more coyotes, would have been the better, not to mention safer, option. Elton (1953) found when Norway rats were eliminated on farms by normal human methods, cats could prevent re-infestations within 50 yards of buildings. The two key elements in their ability to do so – neither of which would be acceptable qualities for urban coyotes – were density and permanent residency on the property, regardless of hunting ability.

The “Urban Wildlife Management Committee” then moved on to economics and expressed concern over the price tag for coyote removal. “The City does not employ staff that deal with problems related to coyotes. A program of coyote removal would require a substantial investment of time” (City of Vancouver 1994b). No cost-benefit analysis was presented. If quick action on removal had occurred at these early stages, Vancouver’s overall investment in coyotes might be far lower than it is today. However, the committee felt understanding coyote behaviour was the best course of action. They had a plan, but in the meantime they offered preliminary advice, most of which did not seem to fit with the experiences of a good century of livestock producers:

“From all that is known to this point, the most effective way to avoid conflict is to increase public awareness of coyote behaviour... There are a few simple suggestions for people in order to discourage coyotes from their property. If possible, perimeter fencing can be regularly ‘scent marked’ with bleach, which tends to discourage the animals. Tying two shiny tin cans together and throwing them in the direction of the animals creates a bright and noisy scare technique, which may also act as a deterrent. It is very important to be consistent with any techniques employed to discourage coyote presence. Proper care and control of small pets and removal of edible waste are still the most effective ways of reducing coyote/human interactions. Further information on coyote deterrence may be obtained from the Wildlife Rescue Association...” (City of Vancouver 1994b).

If the “proper care and control of small pets” was going to mean house imprisonment for cats, there was already a problem. In a plebiscite just two years earlier, Vancouverites expressed a strong aversion to animal captivity, with the majority voting to close the Stanley Park Zoo (see Wilson 1993a,b; Kinghorn 2001).

Anyone still not convinced of the benefits of urban

<sup>55</sup> See B.C. Trappers Association, Who Are We? (<http://www.bctrappers.bc.ca/who.html>), and B.C. Wildlife Federation, About Us, (<http://www.bcwfbc.ca/about/>).

coyotes must have been relieved to learn how easy it was to discourage them, but the “Urban Wildlife Management Committee” concluded with resignation, “The response to urban coyote problems is limited due mainly to the difficulty of dealing with them in a densely populated urban area” (City of Vancouver 1994b).

### **The “Urban Coyote Project” – Human Dimensions and Eco-Marketing**

Human Dimensions is the “...acquisition and application of social science data to wildlife and natural resource issues. It can be divided into two parts: acquiring information on human thought and actions through the application of social science methodologies; and the application of that information to developing suitable approaches to wildlife problems or issues” (Manfredo et al. 1995). Practitioners describe it as a tool to “manage people,” to “influence beliefs, attitudes, and behaviors to promote stewardship of natural resources” (Wise and Minnis 1998). In this form, it takes on the clear role of eco-marketing. Since a chosen goal may be specious, as with the plan to get rid of cats on environmental hazard grounds, the field is very open to abuse.

A textbook example of Human Dimensions as a means to a predetermined end is as follows:

“The first step in planning and designing human dimension programs is to define specific goals and set measurable objectives. Goals define the management philosophies within which objectives will be pursued... One goal of a raptor education project may be ‘To increase the percentage of Virginians from 50 percent to 75 percent by 1992 who think money spent by state government on urban peregrine falcon releases should be increased’” (Duda and Schaefer 1990).

In the September 2, 1994 report to Vancouver City Council, the first reference to the “Urban Coyote Project” was made:

“The Urban Wildlife Committee is currently seeking support for a two-year urban coyote research project, which is scheduled to commence at UBC in September 1994. Material support and physical assistance for the study has already been arranged with groups involved in the Committee, including the Ministry of Environment, Stanley Park Conservation Committee and B.C. SPCA. The research is contingent upon additional funding being obtained through government and private sources” (City of Vancouver 1994b).

The “Urban Coyote Project” played an integral role in formation of today’s “Co-existing with Coyotes” strategy. Its results, contained in the thesis *Urban Coyotes in the Lower Mainland, BC: Public Perceptions and Education* (Webber 1997), seemed to reinforce the idea of anti-urban-coyote people as the “vocal few” with everyone else happy to “modify their lifestyle or habits to maintain or enhance wildlife activity in the city” (Webber 1997: 25). Human Dimensions pre-marketing surveys provided clues for the creation of educational materials that would reinforce positive beliefs, even if erroneous, and defuse concerns and negative perceptions, even if accurate.

The “Urban Wildlife Management Committee”

obtained funding of \$10,820 for the “Urban Coyote Project” through a City of Vancouver Environmental Grant. The grant application was discussed in a December 1995 Administrative Report:

“Based on the information available, it was the General Manager of Parks and Recreation’s opinion that the most effective way to avoid conflict with coyotes was to enhance our understanding of the animal and increase public awareness of coyote behaviour. The Urban Coyote Project seeks to target the coyote problem based on this philosophy and has the support of the Urban Wildlife Committee” (City of Vancouver 1995a).

But the “Urban Coyote Project” and “Urban Wildlife Management Committee” transformed the impartial-sounding concept of “enhancing understanding” into the makeover-oriented “fostering an appreciation”; “increasing awareness” became the romantic notion of “coexistence”: “The proposed program aims at fostering an appreciation of urban wildlife and will emphasize the coexistence between humans and coyotes in the City of Vancouver” (City of Vancouver 1995a).

“Coexistence” with dangerous wildlife was an untried approach. There was no particular reason to believe it would be a good idea, especially when the Father of Conservation Biology himself had written just that year that convivial coexistence between animals is rare, that “the much more common kinds of interactions are competition, predation, parasitism, and disease (Soulé 1995:143).”<sup>56</sup> As in the textbook eco-marketing example, “coexistence” was the management philosophy goal, and the objective was to get the public on-side through “education” based on “science”. The three components of the “Urban Coyote Project” were “to determine more about the local habits and biology of urban coyotes; to identify the specific concerns the public has with respect to urban coyotes; and to produce educational materials and programs that address the public’s fears and concerns” (City of Vancouver 1995a). The City of Vancouver would finance the survey and educational components, the Stanley Park Ecology Society was also a sponsor, and Kristine Webber would conduct the work with input from the “Urban Wildlife Management Committee” and other agencies. By environmental grant standards, the “Urban Coyote Project” was considered a “somewhat atypical project that does not have easily measurable environmental benefits,” but it targeted an unmet need of producing and distributing coyote-specific education pertaining to the City of Vancouver.

“It is hoped that by working with all the affected agencies a formal coyote management protocol can be developed for responding to coyote problems. At present, without any formal guidelines for addressing coyote complaints,

<sup>56</sup> However, Soulé’s Wildlands Project website has a more optimistic message for the general public: “People can coexist with wolves, bears and other wildlife, just as they have for thousands of years and continue to do in many parts of the world, including North America. In most cases, humans can easily learn to safely coexist with wildlife by making minimal lifestyle changes” (Wildlands Project *no date*). For practical purposes, Soulé must trust that people, especially urbanites, have the same susceptibility as wild prey to lose fear of predators after prolonged lack of exposure (see Gittleman and Gompper 2001).

agencies are seen as doing nothing to alleviate the public's concerns.

"The staff review committee feels that the Urban Coyote Project has merit in that it will help to alleviate residents fears and the frustration they feel regarding nothing being done to address the current coyote problems... Notwithstanding the above comments, the review committee questioned the severity of the problem and the benefit to be achieved but felt on balance, the project should be endorsed given the increasing coyote incidences / complaints trend." (City of Vancouver 1995a)

In the Acknowledgments to her thesis, Webber (1997:x) describes herself and her associates as "eco-freaks". Researchers, like everyone, have views. Still, the description raises the concerns cited earlier about Deep Ecology tendencies among conservation biologists and the redefinition of a scientist's role from truth-seeker to advocate and marketer of nature. Webber did not really have enough money, resources, coyote cadavers, or scat collectors to do in-depth fieldwork on coyotes. She was most interested in the Human Dimensions part, but again had cost and time constraints.

Looking back, it would be unfair to say Webber's thesis proved Vancouverites ever had their hearts set on "coexistence." As noted earlier, the miniscule fraction of the populace surveyed fared so badly on the "Coyote Awareness Index" (Webber 1997:17,20,40) that their opinions might be likened to a jury asked to render its verdict without the inconvenience of sitting through evidence and submissions at trial. Certainly, Webber complicated things further by misrepresenting the data obtained. For example, she asked her non-randomly sampled veterinary clients and naturalists a question on acceptable circumstances for destroying "problem wildlife" they had just identified from a list that included rats, raccoons, mice, coyotes, Canada geese, crows, skunks, pigeons, starlings, squirrels, and seagulls, then misleadingly charted their answers as if asked exclusively about coyotes (see Webber 1997:34,71). The question itself was of poor design and probably confused respondents, because people's norms for destroying an animal in a given situation vary by individual species (Wittman et al. 1998). Indeed, when the randomly sampled GVRD respondents were asked the same question but specifically about coyotes, they gave much higher responses for pet safety (almost 20% compared to about 5% in the non-random groups), even though only 44% of the random GVRD actually had a pet compared to 96% of the vet clients and 62% of the naturalists (Webber 1997:19,31,34,69-70).

One question allowed Webber to dispose of core preferences that went against "coexistence." Respondents were asked to choose from a list the method most appropriate to address "problem wildlife" (vet client / naturalist survey) or the method(s) most appropriate for dealing with urban coyote complaints / concerns (random GVRD survey). "Relocation" turned out to be popular with everyone and the solution most preferred by the random GVRD sample (again the only group asked explicitly about coyotes) (Webber 1997:24,30,34,67,69,71). Webber knew from her involvement with the "Urban

Wildlife Management Committee" that relocation was not a viable strategy (City of Vancouver 1994b, Webber 1997:38). However, its inclusion in the list of choices may have diverted opponents to "coexistence" away from the only other removal-type selection of "humane destruction." When the red-herring "relocation" was disqualified, "education", and hence "coexistence", won by default.

### **2000-2001: "Co-existing with Coyotes" Gets Added Bite**

While all these efforts were going on to solidify the Vancouver-as-wildlife-preserve vision, the coyote population was continuing to grow. The same predator agencies involved in the "Urban Wildlife Management Committee" met in April 2000 to consider their options in the face of increasing incidents involving coyote interactions with humans. Meanwhile, in a postmodern version of *The Boy Who Cried Wolf*, "dozens and dozens" of legitimate complaints to city and provincial authorities about a habituated coyote were ignored until it attacked a 12-year-old girl (Bailey 2000), thereby conclusively proving its aggressiveness. After the attack, Mike Mackintosh defended the prevention strategy of removing a coyote only after it bit someone:

"There are roughly 200 coyotes in Vancouver and 2,000 to 3,000 in the Fraser Valley. But despite the large numbers, according to MacIntosh [sic], there are only three or four aggressive coyotes around the city and they reside only in selected areas...despite some aggression, there are currently no plans to destroy this small contingent" (Bailey 2000).

The provincial government reaffirmed its mandate: "The Ministry of Air, Land, and Water Protection staff will respond when an individual aggressive animal poses a hazard to human safety" (City of Vancouver 2001). Some public input on behalf of pets did occur at this time, described below in the mocking tone of a coyote-loving journalist abandoning any semblance of objectivity:

"At a public round table on urban coyotes, a Vancouver hypnotherapist, who'd been stalked on a number of occasions as she walked her dainty and diminutive Lhasa Apso, Beauregard, called for the population to be culled. She'd collected a number of harrowing tales about coyotes to support her complaints. One elderly woman was traumatized after four coyotes carried off the tiny dog she was walking in Stanley Park. In another case, a \$500 Bijon Frise was grabbed off its leash by a coyote near Davie Street. She challenged the park board's claim that coyotes and humans could co-habitate with little problem" (Page 2000).

But an escalation in protest by the "vocal few" was not about to reverse years of work by pro-coyote activists: "The long term approach with the greatest value is public education and increased public awareness. The Co-existing with Coyotes Program, developed by the Stanley Park Ecology Society, is endorsed and financially supported by the agencies. The program creates understanding and empowers residents to deal with coyotes." (City of Vancouver

2001)

Urban coyote advocates jumped another hurdle in 2001 after more coyote attacks on humans prompted a report to Vancouver City Council from Community Services and the Board of Parks and Recreation:

“In urban areas, coyotes are increasingly losing their natural distrust and fear of humans. Wildlife experts maintain that this habituation process mainly occurs because of human feeding, both intentional and unintentional. Individual animals become increasingly bold in the presence of humans. They learn quickly and pass this information along to their offspring.” (City of Vancouver 2001)

This information was probably extracted from a paper by Baker and Timm (1998) on coyote conflict management in Southern California, which also emphasized:

“The motive for predatory behavior of coyotes is not always hunger (Connolly et al. 1976) or protection of dens, as demonstrated by many of the attacks discussed in this review. While the availability of food from humans in urban and park settings contributes to the attractiveness of the habitat to coyotes, their loss of fear of humans would not occur without a lack of aggression by people. Human activities, including organized trapping programs, sport hunting, and other activities that resulted in scaring coyotes away, reinforced the coyote’s inherent wariness of people. But, changes in human attitudes toward the protection of all wildlife have resulted in coyotes taking advantage of their opportunity to frequent prey-rich, human-created environments without harassment. Authorities and citizens must act responsibly to correct coyote behavior problems before they become a public safety hazard. *It is the experience of the senior author, and of persons interviewed, that when action is taken before pet attacks are a common occurrence, further problems can be avoided. However, this requires that aggressive actions and use of scaring devices be initiated promptly when coyotes are seen or heard close to residences. If pets are being taken frequently, or if other food sources have been used for a long period of time, leghold trap use is the best and longest-lasting behavior modification tool.*” (Baker and Timm 1998:311) (emphasis added)

But Vancouver’s fostering-an-appreciation-of-coyotes philosophy and teachings had already entailed years of perseverance by urban environmentalists in discrediting residents’ claims about pets being killed, and wilful blindness by the provincial authorities.

In defence of coyotes, the advisors clung to the beneficial rat-eating function, even though by now there had been 10 years to take another look at Quinn (1992) showing no rat consumption by coyotes in neighbouring Washington and minimal rodents in urban scat beyond squirrels. Webber’s Vancouver-area thesis had been out for 4 years, showing cat and dog more than double the proportion of small mammals in coyote scat (Webber 1997:52), signifying that even if rats were within her

“small mammals” category, a coyote rat-patrol was exacting too great a price on families.<sup>57</sup>

The inappropriateness of live trapping, translocation, shooting with tranquillizer rifles, snares, kill traps, and poisons was reiterated much as the “Urban Wildlife Management Committee” had done seven years before. The local wildlife contractors reluctantly identified earlier for private hire were now officially excused from participation; predator advocates were about to create the false impression still held by most Vancouverites that only conservation officers can remove urban coyotes:

“The most effective but controversial method for removal of coyotes is to shoot them. Even this is difficult as coyotes learn very quickly to identify people and situations to avoid. For this reason the only people that remove problem coyotes are highly experienced and trained wildlife control personnel.” (City of Vancouver 2001)

Endorsement of shooting at least exposed the sham of its earlier rejection for safety concerns. Then, the report addressed culls:

“Media stories this summer have focused attention on proposals for the culling or translocation of coyotes. Research, however, has shown that a large scale removal (cull) of coyotes is not an effective or reasonable strategy for the following reasons: Records of coyote incidents demonstrate convincingly that most coyote problems are related to individual problem animals, not entire populations. The removal of individuals usually resolves the problem.” (City of Vancouver 2001)

This was probably meant to dismiss the B.C. Wildlife Federation, whose executive director, Doug Walker, told a reporter earlier that summer, “Basically, you need to cull the herd, cull the population. . . The only practical way to do that is to have trappers selectively trap coyotes” (Bohn 2001). Instead, the city would focus only on individual bold animals approaching humans, allowing all other coyotes to continue their wholesale culling of cats.

Coyote culling would also cause the “rebound effect”: “Biological information shows that coyote populations are resilient. Where numbers decline, coyotes often increase their birth rate as compensation” (City of Vancouver 2001). Pro-predator activists always portray this as a phenomenon unique and mystical to coyotes, when it is not at all unusual. The “Baby Boom” was a “rebound effect” after World War II. Rodents and cockroaches “rebound” too, but most people, probably even environmentalists, don’t “coexist” when they discover these things in their attics or walls. Resiliency does not negate the value of lethal control. Instead, it indicates a cull cannot be viewed as a one-time event but an annual undertaking like the flu shot or spring cleaning. Each successive year would be easier though, both by behaviour modification effects (Baker and Timm 1998) and by the math that fewer coyotes, even if producing an extra pup in their litters, would result in fewer coyotes overall. Furthermore, in fragmented urban landscapes,

<sup>57</sup> Webber could be smug as the owner of an indoor-only cat, possibly acquired in less enlightened days before coyotes altered her career plan to become a vet (Page 2000).

coyotes can take years to recolonize after small-scale control measures are undertaken (Quinn 1992:93-94).

Other problems with culls included “significant liability issues for people and pets in heavily populated urban areas” (City of Vancouver 2001). Since shooting had just been re-sanctioned, this excuse was probably meant to promote fears of children and pets being hurt in soft leg-hold traps, despite earlier admissions about their safety (City of Vancouver 1994b). Coyote researchers use these traps all the time without public protest or incident to children, dogs, or coyotes, and the tension pans are set so they do not trigger for lighter animals (Baker and Timm 1998). Culls were also described as expensive and of limited success, with short-lasting population reductions. “In Glendale, California the impacts were only noted for a six - twelve month period, after which the coyote population rebounded to previous levels” (City of Vancouver 2001). In describing Glendale’s program, Vancouver remained fixated on its earliest stages (see also Lee and Bohn 2001), while the program had evolved. Baker and Timm (1998) described Glendale, with its strategic culling and more realistic focus for “education” than “fostering an appreciation”, as successful in preventing attacks on humans and, importantly, also reducing predation on pets:

“Of all techniques, trapping has the greatest observed effect of re-instilling the fear of humans in coyotes. *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.* A seven- to ten-day trapping period using careful, selective trap placement in areas frequented by the offending coyotes is usually sufficient to re-instill their fear of humans. Eradication of all coyotes in the area is neither attempted nor necessary. The coyotes using the area often disperse after trapping and euthanasia of two to five coyotes; this is partially dependent on the size of the area, the number of coyote family units using the area, and the existing level of fear in the behavior imprint of the coyotes. It is harder to modify the behavior of coyotes that have been using urban areas for generations. Often this requires taking coyotes in greater numbers, and sometimes a second trapping phase is needed... The City of Glendale demonstrates what a responsible and effective program can do. People are educated to better coexist with wildlife. When necessary, coyote behavior is modified by institution of a limited trapping program. Before the education and trapping control program was initiated, numerous human attacks from coyotes had occurred, including the tragic death of a child in 1981. Reports of humans being harassed within the city are now uncommon, and no bite cases have been recorded for more than 10 years due to the success of the program. *Pet attacks were also very common, and pets were shown to comprise a measurable portion of the coyote diet* (Wirtz et al. 1982). *Over the last four years, a low incidence of pet attacks has been reported, averaging slightly*

*more than four cats and one dog lost per year. This compares to much smaller communities that report 20 to 50 pet losses per year* (Capt. Michael Post and Lenae Dunn, City of Glendale Police Dept., pers. commun.)” (Baker and Timm 1998: 310,311) (emphasis added)

If the Glendale pet numbers were true, it was wrong for Vancouver to dismiss their program. In 2001, Vancouver chose to increase funding to continue the short-term solutions implemented after the two attacks on children that summer. These included longer hours of operation for the “coyote hotline”; coyote awareness lectures to elementary school children; neighbourhood coyote safety programs; printing extra brochures; warning signs in parks; neighbourhood visits by a Park Board Wildlife Ranger to alert communities about coyotes, provide information and support (grief counselling?), and investigate / report to provincial wildlife personnel incidents of aggression. The “Co-existing with Coyotes” funding increased by \$33,000, and ongoing support for the enhanced program would require \$60,000 to \$75,000 annually (O’Connor 2001, City of Vancouver 2001); yet Glendale’s budget for behaviour modification through selective trapping, even when doubled in 2004 after a Baker-Timm prodrome was identified, was only \$24,000 US (Anonymous 2004), one-third to one-half the cost of Vancouver’s new strategy.

City Councillor Sandy McCormick suddenly reversed strong anti-coyote views (Page 2000, Culbert 2001, Lee 2001, Lee and Bohn 2001), instead supporting these proactive non-lethal initiatives that would avert the need for reactive steps ultimately costing more (O’Connor 2001). McCormick may have become more concerned about the “cost” of culling to the city’s prestige. The “Urban Wildlife Management Committee” had warned about public protest from the beginning (City of Vancouver 1994b). Vancouver animal rights activist / Park Board commissioner Roslyn Cassells had mobilized a letter-writing campaign in 2001 at the first mention of “cull” (Cassells 2001). Glendale, in population the third largest city in Los Angeles County, does face the wrath of animal rights activists and bad PR as a result of their stance on coyotes (Boghossian 2004). Vancouver is much more high-profile than Glendale by world standards, consistently winning or ranking in the top few as the World’s Most Liveable City (Mercer 2007). The last thing City Council wanted was an animal rights celebrity like Vancouver Island-born PETA poster-girl Pamela Anderson, maybe Britain’s Linda McCartney, flying in to accuse the Vancouver of the urban equivalent of clubbing baby seals.<sup>58</sup> By comparison, 10 stitches on a baby girl’s face (Lee 2001, SPES 2007e) or the low-key sacrifice of several thousand loved cats per year is a small price to pay for “coexistence”.

### **The Iron Triangle – No Pet Lovers Allowed**

Meetings leading to establishment of the 2003 “B.C.

<sup>58</sup> Canada might do better to have Norway’s confidence in the face of activism against animal culling practices. Norway is ranked the best country in the world by the United Nations in spite of not only clubbing baby seals but creating a tourist industry around it. See Anonymous (2006a), Jowitz and Soldal (2004).

Wildlife-Human Conflict Prevention Strategy” further solidified “iron triangle” relationships (Adams 2001) between government and the pro-predator activists who have powerfully replaced “consumptive” wildlife recreationists in the phenomenon described below:

“Wildlife management agencies are biased toward consumptive wildlife recreation (Kennedy, 1985; Phillips, Boyle, & Clark, 1998). Over time, the relationships between the regulator and the regulated form what political scientists call ‘iron triangle’ relationships which ‘...tend to develop coincident values and perceptions to the point where neither needs to manipulate the other overtly. The confident relationships that develop uniquely favor the interest groups involved... Once molded, the triangle sets with the rigidity of iron’ (Adams 2001). When public officials advocate, it is likely they will advocate for professional values that are remarkably consonant with constituent values and dissonant with public values (Wagner, 1989; Yaffee, 1994, 1995).” (Gill 2001:24)<sup>59</sup>

The 5-year “B.C. Wildlife-Human Conflict Prevention Strategy” pilot project focuses on B.C.-wide prevention, rather than the traditional ineffective response of reacting to conflicts as they occur that has “consumed an increasing amount of government resources” (MWLAP 2003:1,3,4). The Ministry of Water, Land and Air Protection adopted a strategic shift “from the ministry as sole protector of the environment to sharing responsibility for the environment with others as appropriate” with “clear roles for the ministry, industry and other stakeholders in the gathering and reporting of environmental information and achieving environmental objectives” (MWLAP 2003:6). In the face of dramatically increasing wildlife-human conflict (MWLAP 2003:4), there is to be a dramatic reduction in the province’s already inadequate response. The B.C. Conservation Officer Service

“...will no longer respond to reports when there is no threat to human safety or to livestock, or when there is minor property damage... The public and industry are going to have to accept a greater role and responsibility for the environment... It is not reasonable to expect provincial staff to have the capacity to deal with every human-caused or wildlife-related situation that arises in the province.” (Ministry of Environment 2002)

“Wildlife-human conflicts...have social impacts. One such impact is the loss of pets to predatory wildlife. Another is public reaction to methods of dealing with conflicts. Often the only way to remove a habituated and therefore poten-

tially dangerous animal is to destroy it humanely, before someone is injured. Methods used by government staff to defuse dangerous wildlife situations are never popular and can be upsetting to witness. The public demands alternative mechanisms to resolve these issues. Preventing conflicts is the best solution. People must realize, however, that it is not possible to eliminate all risks to human or animal health and safety associated with wildlife-human conflicts.” (MWLAP 2003:5)

A “targeted consultation” process was undertaken as part of the B.C. policy formation,

“...with selected communities, First Nations, NGOs and other jurisdictions...between December 2002 and February 2003. The ministry invited these stakeholders to participate in the strategy’s development by giving their input at face-to-face meetings. The working group considered all of this input in developing the strategy.” (MWLAP 2003:2)

Again, urban pet owners, those with a lot more at stake both emotionally and financially than people upset by “methods used by government staff to defuse dangerous wildlife situations”, were not invited to the proceedings despite recognition of the social impact of predation on pets and the greater role in managing the environment to be given the public. From commentary in Appendix 3 (“Wildlife-Human Conflict Prevention Strategy – Stakeholder Consultation Summary”) in MWLAP (2003:20-30), it appears Vancouver was represented by the pro-predator Vancouver Park Board and “Co-existing with Coyotes”.

#### “CO-EXISTING WITH COYOTES” TODAY

“One can reasonably expect public attitudes to assume greater importance in various management and policy decisions as efforts to protect wildlife and natural habitats increasingly require major land-use decisions affecting large numbers of people and having broad social and economic impacts. As the public often bears the lion’s share of such trade-offs, it stands only to reason that their sentiments and perceptions be somehow considered. On the other hand, professionals often encounter a public with views dependent as much on bias and misunderstanding as on an adequate comprehension of an issue’s complexity. Thus, it behooves managers to assess existing levels of public understanding and, in circumstances where wildlife knowledge is judged insufficient, to provide information which, hopefully, will render people more capable of forming intelligent perceptions. *Of course, a thin and ethically difficult line will often distinguish public awareness and educational efforts from manipulative attempts to influence people toward pre-established viewpoints.*” (Kellert and Berry 1980) (emphasis added)

“Co-existing with Coyotes” is now firmly entrenched in the City of Vancouver. It is cited as a model program worthy of emulation in cities where coyote migration is new (for example, see Battiatà 2006,

<sup>59</sup> The “iron triangle” transformation favouring relationships with predator activists is ongoing and evident. Some U.S. state fish and game departments, for instance, now divert hunter-generated revenue meant for habitat conservation to promote “wildlife watching” instead (see Dovel 2007a). Despite short-term loss of pristine vistas to eco-tourism (e.g., Gehrt 1996, intro), ultimately unchecked carnivore populations may chase most people off the land altogether, compatible with Wildlands Project objectives. Conversion stories of those surviving a cougar, wolf, or grizzly attack reveal “wildlife watching” is a lot less fun when it entails watching the wildlife eat friends and family.



Prois 2006). The program is run by the non-profit Stanley Park Ecology Society, which “encourages stewardship of our natural world through environmental education and action, and builds awareness of the fragile balance that exists between urban populations and nature” (SPES 2002).<sup>60</sup>

As an NGO, the Stanley Park Ecology Society has a built-in lack of accountability. It is governed by the *B.C. Society Act and Regulations*. It is not required to report its financial statements. More importantly, its actions are not subject to public scrutiny and the “transparency” that is demanded (especially by environmentalist groups) of government bodies. Conversely, a B.C. government body is held in check by the *Freedom of Information Act* and cannot get away with cutting a person off just because they feel like it.

Currently, the Ministry of Environment contributes a “visionary” (more than \$10,000) yearly grant (SPES 2006:14). In return, the program buffers the province’s 24-hour Wildlife-Human Conflict Call Centre from complaints that might otherwise reach them directly: in a 1-year period, “Co-existing with Coyotes” “responded to more than 900 individual requests for information and help concerning urban wildlife” (SPES 2006:10). The Vancouver Board of Parks and Recreation supplies another “visionary” grant. The 2005-2006 Stanley Park Ecology Society annual general report lists no private donations specifically to “Co-existing with Coyotes” that would suggest a base of zealous coyote supporters within the City of Vancouver. Indeed, taxpayers wholly fund the SPES eco-pet project, with no financial reciprocation from Stanley Park to those enduring coyote-induced vet bills and loss. This free ride for “urban ecologists” was set up in Webber’s (1997:35) survey questions wherein “willingness to pay” for wildlife, the no-nonsense measuring-stick used by past Human Dimensions researchers, was cleverly replaced by the soothingly optimistic but by far inequitable “willingness to change personal behaviours to maintain or enhance urban wildlife activity”.

The “Co-existing with Coyotes” program has a staff of one. The coordinator spends half the time visiting elementary schools and teaching about 12,000 children per year how to identify a coyote and what to do to if they see one (SPES 2006, Battiata 2006). Any teacher could do this, of course. The advice is fairly simple and straightforward and perhaps set out more sensibly on the SPCA website (BCSPCA 2007). The SPCA does not confuse its readers with recommendations (as found in SPES guidelines; SPES 2007a) to throw awkward and heavy “can clangers”, “coyote shakers”, and basketballs, which certainly travel less than the coyote’s 40 miles per hour, but suggests only easy-to-wield readily available items.

The rest of the coordinator’s time is taken up with investigating nuisance reports, answering calls from homeowners (Battiata 2006), and providing media interviews (SPES 2006:10-11). Former coordinator Boelens also took it upon himself to personally scare unwelcome coyotes into less-visible night-time hunting

schedules (Battiata 2006).

### The Website

“Co-existing with Coyotes” also runs an elaborate website (<http://www.stanleyparkecology.ca/programs/urbanWildlife/coyotes/>). People from more than 300 North American cities and towns have contacted the program seeking urban coyote information and advice (SPES 2007g), including most recently Audubon Portland (supporters of the American Bird Conservancy’s “Cats Indoors!” campaign) and the California-based animal / coyote rights Animal Protection Institute (SPES 2006:10).

The information on the website is of two types. The first gives the same basic information available on the BCSPCA and City of Vancouver websites in their respective coyote sections. The second comprises the effort to alter public attitudes by reducing the perception of risk and marketing respect and admiration of coyotes, just as Kristine Webber’s (1997) foundational thesis outlined:

“When particular levels of damage are exceeded, tolerance to wildlife declines (Decker and Brown 1982, Craven et al. 1992, Liggins 1995); thus *educational materials which reduce the risk (or perceived risk) of conflict, such as the depredation of pets, may improve attitudes toward wildlife and increase residents’ tolerance to wildlife*. Decker and Purdy (1988) described a concept called Wildlife Acceptance Capacity (WAC) which is analogous to biological carrying capacity or social carrying capacity, but describes how human preference and beliefs affect management decisions. Wildlife acceptance capacity reflects the acceptance of a given constituency for particular species at a given time and depends on the attitudes and beliefs of people that comprise that constituency. *Changing how people perceive a species and the damage or risk caused by that species, is integral to increasing the WAC*. Attitudes are determined by peoples’ beliefs (perceived knowledge) about an object and their beliefs about the consequences of their actions toward that object (Morgan and Gramann 1989). Other studies have shown that attitudes (Kellert and Berry 1980) and preference (Dagg 1974, Schauman et al. 1987) are related to an individual’s knowledge about wildlife and habitats. Thus if someone believes that coyotes are large, dangerous carnivores, they will likely feel fearful and negative toward coyotes. If, on the other hand, the public is well-informed about the size, likelihood of attack, or the chance of contracting rabies, their attitudes will likely reflect this...raising public awareness about coyotes and eliminating common misconceptions, should be an effective way to change underlying beliefs and improve the attitude and increase the WAC of the general public toward the presence of coyotes in the GVRD.” (Webber 1997:39-40) (emphasis added)

With this as the basis for “education”, it is not surprising that “Co-existing with Coyotes” approaches the matter of pets gingerly. In fact, “Co-existing with Coyotes” hesitates to admit coyotes are a “problem” at all, as

<sup>60</sup> The idea of a balance of nature has been out of dominance among ecologists for half a century (Cronon 1996, Barbour 1996).

evidenced by the alert quotes placed around the word on the website: “The agencies involved in Co-existing with Coyotes believe that the only successful long term solution to the ‘problem’ of coyotes in urban areas is through public education” (SPES 2007a).

### **Coyotes and Cats – Under-Reporting Predation, an Egregious Necessity**

One way to lower the “perceived risk” of coyotes is to minimize the extent of predation on cats. Unfortunately, this also eliminates the ability of pet owners to accurately assess their options and the more basic question of whether “Co-existing with Coyotes” is a successful, and thereby acceptable, strategy. Most egregiously, the coyote diet is not presented honestly to allow meaningful risk assessment. The website reports:

“Coyotes can eat almost anything (rodents, fruit, insects, fish, garbage). Urban coyotes primarily prey on the immense city rat and mouse population as well as squirrels, raccoons and other small mammals. They also eat apples, berries and other fruit, leftovers from composts and garbage, fish, snails, birds, eggs and outdoor cats and small dogs.” (SPES 2007b)

It starts to sound like coyotes are almost vegetarian, until the punch line at the end of the paragraph. Listing these diet items by frequency of occurrence in scat from Webber (1997:52) would more accurately portray the extent of cats eaten. Former coordinator Boelens praises Webber’s thesis but rejects her one inconvenient section on diet (R. Boelens, pers. commun., Nov. - Dec. 2005). It is true the number of scats and stomachs analyzed was small for a scientific study, but the results are compelling when taken with Quinn’s (1992) extensive scat analysis in nearby Washington State and well-supported today by anecdotal evidence.<sup>61</sup>

Both Webber (1997) and Quinn (1992) found cat to be a significant, if not the largest, food item in the urban coyote diet. Quinn’s results, discussed earlier and based on a total of 854 urban scats, bode slightly worse for cats than Webber’s. The 22 scat samples Webber collected were likely close to residential areas within Vancouver, as opposed to the majority of the 11 cadavers from which stomach analysis was obtained (Webber 1997:49).<sup>62</sup> In

<sup>61</sup> In 2005, Conservation Officer Mike Peters told this author the “number one food” for urban coyotes is cats. Some people report lost cats to the SPCA. Of 700 cats within the City of Vancouver reported lost to this organization from October 2005 to October 2006, only 212 were reported found or returned. Before removing lost cat notices posted at their shelter, the Vancouver SPCA follows up with owners to see if the cat was found. The SPCA’s computerized database is new, precluding a trend search. Veterinarian Nicky Joosting of Vancouver Feline Hospital “hears of about 10 cats a year being eaten by coyotes and another two or three being brought in for related injuries” (Webb 2008); while this appears at first to be minimal coyote predation, if even a portion of Vancouver’s vet clinics have similar experiences, the degree of killing today is far above this author’s calculations (see footnote #12).

<sup>62</sup> Webber tells the reader, “It was difficult to distinguish between domestic dog and coyote faeces”, and that scat was “collected only in the vicinity of known den sites and along frequently used coyote travel routes” (Webber 1997:49). This indicates the scat was collected in well-monitored areas and where dogs were regularly walked. The cadavers came from Langley, Richmond, Surrey, Burnaby, and Vancouver and were “collected at motor vehicle accidents, donated by private citizens, and provided by conservation officers” (Webber 1997:49, Appendix A). How many cadavers came from each area is not given;

Webber’s scat, cat was the third-highest diet item after grass and coyote, two items that may not even be “food”<sup>63</sup> In decreasing order in scat, cat at about 15% was followed by fruit at 12%, “small mammals” at 10%, dog at 7%, birds at 2%, and no garbage or opossums (Webber 1997:52). In the 11 cadaver stomachs, many or most from outlying municipalities (Webber 1997:49, Appendix A), a more typical diet of non-residential coyotes was confirmed, with “small mammals” followed by coyote, grass, birds, opossum, garbage, fruit, and no dogs or cats. Notwithstanding the above, Webber (1997:ii,54) had the audacity to suggest “domestic pets were not a primary food item” and that coyotes may simply be scavenging rather than killing pets.

### **A Note on Cat and Scat**

Recent studies are coming up with low consumption of pets, but researchers can easily skew coyote diet analysis. For instance, Dr. Gehrt’s research team reported no dog and only 1.3% cat in 1,429 metropolitan Chicago scats (Morey 2004, Gehrt 2006), even though pet-coyote incidents are a problem in Chicago (Lyons 2004) and the Gehrt study itself was “driven by the county’s animal and rabies control program and the Max McGraw Wildlife Foundation...which were responding to an increase in the number of complaints and incidents about coyotes and pets” (Berger 2005). Of the team’s 1,429 scats, 1,279 came from coyotes in 3 wildlife preserves with abundant resources that allowed them to have small territories they rarely left, making scat easier to find (Gehrt 2006, Morey 2004:11, 17,18,81). The other 150 scats came from a collection of parks within the Village of Schaumburg nestled between 2 of the wildlife preserves. With a population of 75,400 within its 19 square miles and a human density less than one-third that of Vancouver, B.C., Schaumburg calls itself a village for good reason despite the “city” upgrade implied by Gehrt (2006) through his report’s title, “*Urban* coyote ecology and management”. Regardless, cat frequency of occurrence in Schaumburg scat was 6.7% compared to 0.4%, 0.5%, and 1.2% in the wildlife preserves (Morey 2004:98); but without adjusting for Schaumburg’s small contribution to total scat collected, the study’s overall cat consumption results appear misleadingly low. Even with this adjustment, the overall percentage frequency of cat in scat is still

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probably most were from the less urbanized outlying municipalities. To utilize all of the few coyote cadavers available, the “Urban Coyote Project” would have had to expand its research area from the City of Vancouver, as originally proposed in the Environmental Grant application, to the entire GVRD. It is unfortunate Webber leaves the reader to speculate on this important issue; Quinn (1992:72) says, “Coyote diets can vary dramatically on relatively small spatial scales” and that he “would have wrongly concluded that rural coyote diet (for all items) was significantly different from urban diet by comparing any combination of one rural and one urban site.”

<sup>63</sup> In the author’s email exchange with “Co-existing with Coyotes” in November-December 2005, Robert Boelens denied coyotes eat each other; but Link (2007) says they do. Shargo (1988:48) did not count grass and leaves as food, as they appeared undigested. Also, vegetation (including fruit) occurrence in scat during pup-rearing season may be inflated due to increased deposition rates, resulting in the erroneous interpretation that plant material is more important than non-plant food items among seasons and sites (Morey 2004:84). Webber does not say what time of year she collected scat to account for possible over-representation of vegetation; for the cat component, Quinn (1992:89) states, “The risk of cats being killed [by coyotes] is the same regardless of season.”

misleadingly low because the majority of scats collected came from resident coyotes, with transient coyotes likely contributing only a small proportion (Morey 2004:81). Scat from transient coyotes would be hard to find, it could land anywhere, but these would be incriminating scats since such coyotes travel through home ranges up to 25 square miles (Gehrt 2006) and would come into contact with many residential pets over time.

Another recent Chicago scat analysis also detected no dogs and negligible cat in scat collected from 13 publicly-owned natural areas and one Nature Conservancy preserve in the 6 counties of metropolitan Chicago (Buck and Kitts 2004).<sup>64</sup> Again, these are areas where coyotes could eat locally and avoid extensive energy-wasting residential excursions; indeed, because of the intensive ongoing cull in Chicago,<sup>65</sup> coyotes lucky enough to hold territory in a nature preserve or large urban natural area would be the least likely to risk it.

### More on Cats

“The more time your cat is outdoors the greater the risk it faces, not only from coyotes, but from raccoons, cars, domestic dogs, feline AIDS, leukemia, parasites and other illnesses and diseases as well.” (SPES 2007c)

This “Co-existing with Coyotes” presentation of things other than coyotes that can befall a cat echoes the pro-urban-coyote piece “Tabby Go Home” (Crooks 1998), excluding Crooks’ additional remark about “sadistic humans”. However, there are several flaws in reciting other hazards to justify the coyote threat. One is that, unlike coyotes (and raccoons), all the other things in the “Co-existing with Coyotes” hit list are not excused, minimized, compared, or considered of little consequence but actively tackled publicly and privately. Examples include cat vaccinations, veterinary care, and neutering;<sup>66</sup> dangerous dog legislation and leash laws;<sup>67</sup> dangerous driving legislation, low residential speed limits, speed bumps, and traffic calming.<sup>68</sup>

<sup>64</sup> The Animal Protection Institute posted an article on the New Jersey Garden State EnviroNet website about Buck’s graduate research to disprove the notion of predation on urban pets: “Buck’s analysis of coyote scat, which was recently published by the University of Minnesota, concluded that coyotes living in urban environments continue to feed on animals such as rabbit and deer, and for the most part do not change their diets to include pets or curbside refuse. These conclusions substantiate the observations of many local environmentalists” (Starks 1999).

<sup>65</sup> “The number of nuisance coyotes removed annually from the Chicago metropolitan area increased from typically less than 20 coyotes in the early 1990s to more than 350 coyotes each year during the late 1990s... These coyotes were either trapped or shot by wildlife control professionals. The numbers are likely underestimates of the actual number of coyotes removed from the area because some control efforts are not reported” (Gehrt 2006). By 2004, the number of coyotes removed in the Chicago metropolitan area in response to nuisance complaints had increased by over 1,000% (Gehrt 2004).

<sup>66</sup> Almost all SPCA websites state that neutering and spaying reduces roaming in cats; reduced roaming lowers not only the likelihood of MVAs but mating behaviours that can increase injuries and disease transmission between cats. Current owned-cat neuter rates in the U.S. are between 87% and 95% (APPMA 2006, Miller 2007) and trap-neuter-release programs lower the number of unneutered feral cats.

<sup>67</sup> Owned dogs get little leeway when they attack others’ pets, even a cat on public property (see Anonymous 2006d).

<sup>68</sup> However, given the coyote urban land use preferences outlined in various studies (e.g. Shargo 1988, Quinn 1992, Morey 2004) and the housing-density-

In addition, it is erroneous to attribute a simple linear relationship between time spent outside and all risks. Regarding road accidents, Rochlitz (2003b) compared a group of cats that had been hit by cars to outdoor cats that had never been hit. After adjusting for age, the two populations did not differ in either the time spent outdoors or the time they had lived at their current address.

Rochlitz (2003a) found cats between 7 months and 2 years were at highest risk of being hit by a car; the odds for males being hit were 1.9 times the odds for females; and for every 1-year increase in a cat’s age, its odds for being hit decreased by 16%. However, unlike cars driving down roads with a predictability that would help cats learn to avoid them, Shargo (1988:62,65) believes coyotes move through urban home ranges randomly to prevent prey from anticipating and planning ahead for their arrival.

Other studies show cats to have high survival rates for motor vehicle and other trauma (Kolata et al. 1974, Kolata 1980, Rochlitz 2004) but are falsely reassuring by under-representing spontaneous death.<sup>69</sup> Clinical assessment studies like these, however, could never fairly evaluate survival rates from coyote attacks because there is rarely a body, dead or alive, to present for treatment.

There is no best time suggested to let cats out. If Robert Boelens was going around to problem neighbourhoods he learned about through his position at “Co-existing with Coyotes” and single-handedly scaring bold Vancouver coyotes into less-visible night-time hunting schedules (see Battiata 2006), then cat owners should have been warned of the implications. Instead, Kristine Webber’s thesis remains the only local information and may mislead readers to think night, dawn, and dusk are the best times for cats to be out.<sup>70</sup> Most studies find coyotes to be mostly nocturnal in urbanized or fragmented areas, but perhaps “coexistence” does exacerbate daytime trends: a YouTube video from September 2006 shows a coyote with a Point Grey, Vancouver cat in its jaws at 8 a.m. (Anonymous 2006b); a local animal welfare video shows a coyote eating a cat- or dog-sized mammal at MacDonald Street and 16<sup>th</sup> Avenue, Kitsilano, unperturbed by afternoon rush hour (VOKRA 2007).

“The only way of ensuring that your cat is safe from coyotes is to keep it indoors permanently,” the website concludes (SPES 2007c). Such practice, of course, is one of the most contentious cat welfare issues today. Environmentalists who offer this Stepford Cat “solution” to coyotes ruthlessly ignore the characteristics, work schedules, and other lifestyle factors of owners along with

dependent relationship between MVAs and cats (Childs and Ross 1986, Rochlitz 2003b), coyotes may pose the greatest threat to cats in parts of the city that would otherwise be their safest havens.

<sup>69</sup> Interestingly, the trauma with highest mortality for cats in Kolata et al. (1974) was crush injury, which could be of indoor as much as outdoor origin; another indoor-cat source of mortality is falls, which are more prevalent and serious in urban than rural / suburban areas “owing to differences in housing” (Kolata 1980) (i.e. high-rise pets).

<sup>70</sup> 56% of coyotes were seen in the daytime, 26% at night, 10% at dawn, and 9% at dusk (Webber 1997:53), but using public sightings is a suboptimal technique that may give biased results (see Webber 1997:55). Unfortunately, this author took Robert Boelens’ expert advice in 2001 to read the thesis, which is part of the reason Neutron became one more victim of “coexistence”.

behavioural differences between cats and their varying needs in terms of quantity and quality of space. Some researchers specifically caution against imposing a permanent switch from outdoor to indoor in the life of an adult cat (see Mertens and Schär 1988:179-190), but predator advocates never consider a “sunset clause” before their programs take effect.

Behavioural disorders are reported more commonly in indoor cats (Rochlitz 2000:220). Sedentary indoor cats are also at risk for weakened immune systems; respiratory difficulties, constipation, and skin conditions; serious obesity-related diseases including diabetes, fatty liver syndrome, heart disease, and arthritis (Craig 2001). Most urinary tract disease in cats is linked to anxiety, and much anxiety is linked to a lack of stimulation and complexity in the environment that is relieved by, not surprisingly, access to the outdoors (Durand 2003). The BCSPCA’s fifth essential freedom “to express behaviours that promote well-being” (BCSPCA 2005b) would seem to include going outside. Scholar and author Jeffrey Masson says of confinement, atop all other modifications humans impose on cats, “How far do we take this before we completely destroy the animal?” (Barcott 2007).

### **Coyotes and Dogs – Walk Tall and Carry a Big Stick**

The “Co-existing with Coyotes” website candidly mentions small dogs have been taken directly from the leash. This is an improvement from Webber’s thesis where, “Tales of coyotes snatching small dogs off the ends of leashes remain unconfirmed and likely fall into the realm of urban mythology” (Webber 1997:56).

There is actually plenty of advice for dog owners. A suggestion to the effect that dogs should be kept permanently indoors to protect them from coyotes would be considered absurd and heartless. Supervision, enclosures, and leashes are recommended. “If you notice a coyote when walking your dog, either gather your dog in your arms if possible, or keep it as close to you as possible while using...deterrents...and move towards an active area” (SPES 2007c). For neighbourhoods with regular coyote sightings, additional dog-walking precautions begin to take on a siege mentality tone:

1. If you are uncomfortable making aggressive gestures or throwing objects at a coyote keep a shrill whistle handy when walking your dog. The whistle may not scare the coyote directly (coyotes hear the same daily sirens, car alarms, horns etc. as we do), but it will alert other pedestrians in the area of your need for help.
2. Walk your dog (on leash) in high pedestrian traffic areas such as relatively busy streets, jogging trails and park paths where help is nearby.
3. Coincide the walks with times and locations of activity such as around schools at arrival, dismissal, break or lunch periods, along transit routes or transit connection routes as the work day begins or ends or around parks when activities / sporting events (nightly softball or soccer games) are held.
4. Dog walk with friends and family.
5. Avoid long stretches of bushy areas or paths and roads along abandoned properties.

6. Make sure your dog is ahead of you while walking. If it stops to sniff or scratch behind you while on an extendable leash, keep an eye on it.” (SPES 2007c)

In the event these ideas do not work, there is no description of what to do when the coyote is attacking the pet (or a child). This is increasingly important as people “uncomfortable making aggressive gestures”, or those physically unable to perform effective hazing, assist coyotes in losing their fear of humans. In April 2008, a coyote not only attacked a disabled British Columbia woman rescuing her dog but attempted to drag her toward other coyotes watching at the edge of the property (Orlando 2008). Predators recognize stumbling, limping, illness, or exhaustion as signs of weakness Geist (2007).

Even coyote sympathizers, when confronted with something beyond their romantic musings about wildlife, may find it difficult emotionally to stand by and “let nature take its course” with their own pet, at which time the timid coyote story no longer applies:

“When prey is located, coyotes appear to ‘lock’ onto the target, switching from a foraging or ranging (travel) mode to a kill mode. It seems during this kill mode, when they are ‘locked-on,’ it is difficult to break the attention of a coyote or to dissuade it from attack. Researchers who have observed coyotes preying upon domestic animals have noted this singular focus on a selected prey, almost to the exclusion of extraneous stimuli (G. E. Connolly and F. F. Knowlton, pers. commun.). Those coyotes having less than the usual fear of humans would likely be even more difficult to chase away from prey. In the cases previously discussed, several coyotes that attacked humans were noted to remain close to the victim after being pulled or beaten off. When later shot by police, they were a few yards away and still in sight of the person who was attacked.” (Baker and Timm 1998:308)

### **More on Dogs**

The “Co-existing with Coyotes” website identifies no coyote diseases transmissible to dogs. Parvo is of particular concern, because it can kill puppies before vaccinations take effect. It is spread through contact with feces of an infected animal, and the virus can persist in the environment for months (Miller et al. 2003). Parvo and distemper are found in coyote populations in Washington State (Link 2007). It is unreasonable to suppose B.C. coyotes are free of parvo. Distemper affected Vancouver coyotes, raccoons, and skunks in 1998, killing an estimated 90% of the Stanley Park raccoon population (SPES 2007d:16); in North America, coyotes and wolves are the most common hosts of this disease (Miller et al. 2003). Deadly heartworm is transferred via mosquitoes and can be under-detected in B.C. coyotes (MacKenzie and Waldie 1991, Zimmerman et al. 1992, Klotins et al. 2000, Webber 1997).

Despite endearing photographs of pups and adult coyotes, there is no picture or description of scat. Identification of scat is important for dog walkers on the parvo issue. It would also alert cat owners to new or

increased coyote presence in a neighbourhood while waiting several months for “Co-existing with Coyotes” to get around to posting citizen sightings.<sup>71</sup> Currently, people blame all uncollected lawn and sidewalk feces on irresponsible dog owners without considering coyotes, just as garden scat is automatically attributed to cats without considering raccoons and skunks.

### **Coyotes and People – Fear Reduction**

The “Causes of Child Hospitalizations in B.C.” section of the website (SPES 2007e) is interesting, but the rationale for listing all the things more likely to befall a child than a coyote is akin to a health researcher saying, “Heart disease is the leading cause of death for Americans, so let’s not try to cure anything else.”

The “Fatal Dog Attacks” section provides a breakdown by breed of fatal dog attacks on humans in the U.S. from 1979 to 1998. Like the dog bite data in “Child Hospitalizations”, this is an attempt to defuse fear of coyotes by showing domestic dogs are a lot worse. However, this information does not take into account the nature of domestic dog bites and the voluntariness that normally distinguishes them from coyote bites. According to Basrur (1998), “(a) More than half of all dog bites occur on the dog owner’s property; (b) More than two-thirds of biting incidents on public property occur while the biting dog is on a leash; (c) More than 85% of the victims know the dog that bites them; (d) More than two-thirds of all bite victims are adults; and (e) Nearly two-thirds of all children get bitten as a result of playing with a dog or as a result of teasing the dog, or disturbing it while it is eating.”

The important point is the very real damage canids are capable of inflicting. The valid fear people have of dogs is one of the reasons for dangerous dog legislation and leash laws. But while the city’s well-socialized dogs are all tied up – nice dogs who don’t become nasty when fed – the government makes special rules for its stray coyotes. The website gives an average of 88 hospitalization-inducing dog bites per year in B.C. for “all ages” (SPES 2007e). The City of Vancouver has more than 50,000 dogs (City of Vancouver 2005) compared to 200 to 250 coyotes estimated in 2001 (City of Vancouver 2001). Therefore, it takes 0.35 to 0.44 density-adjusted coyote bites per year to match the rate for dogs, but there is no guarantee people bitten by coyotes fit the willingness profile noted by Basrur (1998) above. And, in fairness to domestic dogs, coyotes should be included in the “Fatal Dog Attacks” section, since readers are entitled to know coyotes too are capable of killing humans, and toddler Kelly Keen of Glendale, California died within the time period covered.

Discussion of the size of coyotes is intended to reduce fear. The website states adult coyotes weigh 9 to 16 kilograms (20 to 35 pounds) and that “adult raccoons

<sup>71</sup> Sightings are posted in an untimely and incomplete fashion. In 2006 after emailing a March 19 sighting, this author waited well over a month to see any March listings go up (mine not included). A random check of the website in early July 2007 revealed the last posting for Vancouver was March 24, 2007 in “Charleston Park” (SPES 2007g). “Co-existing with Coyotes” told the author this was not because of a lack of sightings in the interim but because the section had not been updated (Robyn Worcester, pers. commun.).

and beavers often weigh more” (SPES 2007b). This is much better than comparing coyotes to pit bulls, for instance, or any other breed of similar size in the “Fatal Dog Attacks” list. The range of weights itself is low for the Vancouver area. Coyotes trapped in the GVRD are between 30 and 50 pounds (A. Starkey, Lower Mainland Trappers Association, pers. commun.). The beaver, a herbivore not yet found wandering City of Vancouver streets, is Canada’s national animal and brings happy thoughts to all but those who may have experienced the negative effects of a beaver dam. Coyotes typically weigh twice as much as raccoons, at least in Chicago, and raccoons are less carnivorous than coyotes (Gehrt and Prange 2007). Nevertheless, raccoons are undeniably dangerous<sup>72</sup>, despite public perceptions to the contrary the website counts on in making these comparisons.

Further contributing to fear reduction, the website avoids reports of aggression short of actual attacks. The “Sightings” section could be upgraded to solve this problem and help citizens monitor the escalating warning signs of habituation listed in Baker and Timm (1998). In addition, details of all coyote incidents received by the B.C. 24-hour Wildlife-Human Conflict Call Centre could be posted on the “Co-existing with Coyotes” website instead of being hidden from the public.

### **Coyotes and People – Guilt and Blame**

The “Coyote Conflict History” section (SPES 2007e) reports there have been 7 bites / attacks on humans in the Lower Mainland since coyotes were first spotted in the 1980s. However, the 6 attacks described all occurred in 2000 and 2001. Webber (1997:56) refers to 2 additional instances, one on July 11, 1995 and the other on May 8, 1997, for a total of at least 8 attacks since 1995. “Co-existing with Coyotes” gets all the credit for there being no human attacks since 2001, but the Lower Mainland Trappers Association slips under the media radar to remove about 50 coyotes per year from the City of Vancouver and another hundred from the rest of the GVRD, and trapper Al Starkey believes bites have gone unreported (A. Starkey, pers. commun.).

The attack descriptions try to highlight the point that humans are to blame for all coyote-human conflicts by incorrectly carrying out the “Co-existing with Coyotes” advice. Improper scaring occurred in 2 cases. A man confronted a coyote in a confined space where it had to run past him to escape. A 4-year-old became scared of a coyote at her townhouse complex and tried to run away.

Three of the attack descriptions imply parents improperly supervised children. The 4-year-old who ran from the coyote was playing outside unsupervised by an adult, though fortunately some teenage boys were 80 to 100 feet away. A 17-month-old toddler was allowed to

<sup>72</sup> Aside from aggression, the diseases of relevance raccoons carry in B.C. are raccoon roundworm (*Baylisascaris procyonis*) (a recent study in southwestern B.C. indicated 61% of raccoons are infected), distemper, parvo, anthrax, and rabies (Miller et al. 2003). Though confirmed cases are rare, *Baylisascaris procyonis* infection in humans is probably under-recognized and typically not even considered by clinicians in a differential diagnosis (Sorvillo et al. 2002). Symptoms include nausea, fatigue, loss of coordination and muscle control, inability to focus attention, enlargement of the liver, blindness, coma, and death (BCCDC 2006).

watch his big brother's soccer practice sitting 20 feet away from his parents. A coyote attacked a 1-year-old girl in a private front yard while her mother's attention was diverted by gardening.

In 4 of the cases, feeding by humans is alleged or implied. The coyote that bit the 4-year-old was chewing a bone nearby before the attack. After the attack on the baby, area residents told conservation officers about a local who regularly fed coyotes in a nearby park, and soup bones were found on a trail four blocks away. However, neither the feeder nor the coyote were ever retrieved. A coyote that nipped a girl was found and killed, revealing chicken strips in its stomach. "There had been frequent reports of the coyote approaching people and being hand fed" (SPES 2007e). This was the coyote that prompted dozens and dozens of complaints to authorities beforehand with no action taken; but feeding, not the government, was solely to blame. Lastly, a coyote that attacked a 6-year-old was found and killed, its stomach revealing "a large amount of a stew or soup type substance comprised of meat chunks, animal fat, corn and celery" (SPES 2007e).

Although predator advocates associate both purposeful and incidental<sup>73</sup> feeding with aggression when convenient, wildlife rescue shelters rehabilitate and re-release coyotes right back into the same human-dominated settings they came from with no apparent concern about the effects of human care and feeding (City of Toronto 2004; also see Moneo 2006).<sup>74</sup> A coyote being regularly fed should have remained nearby or returned to the scene of the crime, but 4 of the 6 coyotes described above were never found for stomach autopsies. Geist (2007) offers other explanations for predator attacks as applicable to coyotes protected under a "coexistence" program as un-persecuted wolves:

"...wolves will explore humans as alternative prey, even if there is no food shortage, if they continually come in close contact with humans and habituate. It cannot be emphasized enough that habituation is but a stepping-stone towards fully exploring humans as prey. Habituated wolves will eventually attack, as the next step in exploration, in making the unknown known. This is a principle of exploratory behavior applicable to all animals, not only to wolves. Wolves become dangerous when they run out of food, be it by depleting prey, or by encountering difficulties in hunting by virtue of old age, or young age and lone status and low social rank, or due to illness, or due to injury inflicted by a hunter, or by reacting to a scream of a wounded pack member and attacking, or by mistaking the

human as prey. Well fed wolves can also become dangerous, but under conditions where they take advantage of a rich feeding opportunity that – constantly – brings them into close contact with humans... However, a necessary condition for attacks to occur is the *de facto* or *de jure* protection of wolves." (Geist 2007)

### **Coyotes and People – Let's Play the "Vermin" Shell Game, Part 2 – Coyotes, Voles, and Rats**

"Co-existing with Coyotes" continues to insist that "rats and mice" are the "mainstay" or "majority" of urban and rural coyote diets (SPES 2007c,f) and adds, via answer 10 to the "Coyote Quiz" (July 2008 version), "One very important thing the coyote does is to keep our rodent numbers balanced. In the city, this helps control disease carried by rats and mice" (SPES 2008). The rat and mouse consumption notion, first proposed by the "Urban Wildlife Management Committee" back in 1994, gained the force of science when Kristine Webber started leaking her study to the media to save reporters the trouble of reading it. Webber told Page (2000) that rats and squirrels were the second most common food ingested by coyotes, after grass and before cats and dogs, and that, "Purely in the interests of rat control, coyotes are a great addition to the city." However, in her actual thesis diet results (described above), Webber did not specify rats at all. Knowing how important rat consumption would be to help foster an appreciation of coyotes, she would have headlined their extensive occurrence in stomachs or scat if it had been ethically possible.

In the Santa Monica / Simi Hills area of California, anticoagulant rodenticides are a leading cause of death for coyotes older than 6 to 9 months (Riley et al. 2003), raising the possibility that a poisoned, dying rat might be catchable urban coyote prey. However, there is strong suspicion that the chief cause of toxicant build-up in coyotes in parts of Southern California is not consumption of poisoned prey, be it rats, rabbits, or voles, but direct consumption of homemade coyote baits formulated by residents unable to get any state agency to respond to bold coyotes taking pets (R. M. Timm, University of California, pers. commun.).

Indeed, no research to date has listed rats as a significant or even detectable coyote diet item, urban or rural; and a study specifically looking at functional feeding responses of coyotes concluded encounters with rodents other than voles were likely a matter of chance (Bartel and Knowlton 2005). But, even if coyotes did eat lots of rats, they could not be expected to reduce populations. An experiment in New Zealand mixed forest with introduced predator assemblages showed food availability drives the early stages of mouse and rat eruptions, and that predators can slow but not prevent such upsurges, cannot truncate peak prey population size, do not significantly hasten the rate of decline in prey populations during a crash phase, and have an unclear effect on limiting low-phase prey populations (Blackwell et al. 2003). Likewise, on the urban front, staff at Poulin's Pest Control in Vancouver denied to this author that coyotes have edged in on business and explained the ingenious

<sup>73</sup> In Kerslake and Zakreski (2006), see the garbage dump defence offered for the wolves that killed student Kenton Carnegie in Saskatchewan in November 2005 (though wolf expert / investigator Dr. Paul Paquet later argued unsuccessfully before a coroner's jury that not even garbage wolves but a black bear was the killer) (Purdy 2007).

<sup>74</sup> "Where a coyote is injured, sick or debilitated, an investigation by TAS will determine whether the coyote can recover without assistance or whether it should be captured and brought to a wildlife rehabilitation and treatment facility or be euthanized for humane reasons. In accordance with the Fish and Wildlife Act, the recovered coyote will be located back into the area from which it was captured" (City of Toronto 2004).

anti-predator survival strategies used by Norway rats, roof rats, and house mice. U.S. pest control expert Robert Corrigan (2005) did not directly consider coyotes as potential urban rodent controllers but pointed out, "Around the exteriors and peripheries of city buildings, the abundance of harborages and hidey-holes that can be used by rats and mice greatly limits the effectiveness of any city predator, be it the meanest alley cat, a feisty junkyard dog, or a watchful hawk, owl or falcon."

On the other hand, voles, which Webber probably did find in her "small mammals" category, are native species and, unlike rats and house mice, not "commensal" (living in close association with humans).<sup>75</sup> However, while not structural pests, in cultivated areas voles may be permanently based along roadsides, canal banks, or adjacent uncultivated land or will invade such areas when populations build up or wild habitat becomes unfavorable, such as when range grasses dry up in summer. Females can start producing litters 3 weeks after birth, and populations have 3- to 4-year peak-and-crash cycles (Health Canada 2004) – cycles unpreventable by the empowering "Co-existing with Coyotes" suggestions about securing garbage and pet food. Also, the hypothesis that predators protect human health remains untested – it is far from clear whether, or which, predators might chronically suppress rodents; predation may be important or trivial compared to bottom-up effects; a link between rodent density and zoonotic disease risk has been established in only a few instances; and other factors than prey density may be responsible for increasing the risk of pathogen spread to humans (Ostfeld and Holt 2004). Whether or not predators moderate voles in the GVRD (one subspecies of which is red-listed) (Ministry of Environment 2008), coyotes respond to prey cycle upswings by increasing their own litter sizes unless already at maximum reproductive output (Gese 2005). Vole-induced higher coyote densities in cities mean even higher casualties to pets either by regular or surplus killing. Worse still are situations where suburban coyotes are one- or two-trick ponies, heavily reliant on cyclic prey: pro-coyote researcher Morey (2004:71,74,88,90,98) found a vole / white-footed mouse combo made up 27.9%-73.8% of Chicago nature-preserve scat and 31.3% of scat from a group of urban parks large enough to contain two to three coyote packs plus transients; he admits that cyclic declines of rodents or rabbits, or even just lower diversity of food, could result in coyote populations moving from less-developed areas into the human landscape.

### **Coyotes and People –Fostering an Appreciation**

Other areas of the website are intended to inspire empathy. The "Through Coyote Eyes: A Game of Urban Coyote Survival" (SPES 2007f) is an anthropomorphic mind-bender. A psychologist's expertise would be needed to determine the effects of this game on children's ability to analyze complex issues, but commentary on

movies like Disney's *Bambi* might provide hints.

The "Indian Myths" section is meant to make coyotes appear native to Vancouver, in support of the positive if mistaken attitudes identified in the foundational study about coyotes "deserving to be here" and "being a natural part of the ecosystem" (Webber 1997: 28,39). On closer look, the stories are attributed to Plains Indians, not B.C. Indians. Indeed, playing the Native Indian card is a shaky approach. Indigenous peoples say a lot of things the implications of which conservation biologists are loath to acknowledge. Australian aboriginals, for instance, believe cats are native to their continent (Grossman 2008), which ought to drastically alter anti-cat conservation activities there; North American Indians have described how wolves ate and dispersed humans (Geist 2008), dispelling the "rewilding" eco-myth that wolves are not dangerous to people; and North American Indians themselves were not-so-noble savages who beat, overworked, ill-fed, and ate their own dogs that were probably bred from coyotes (McGee 1897).

Positive messages and fostering an appreciation may increase the "WAC" for this "ideal 'flagship' species", "bold, curious, and wild", with a "captivating urban personality" (Webber 1997:39-40,57), but what effect do they have on the unified effort crucial to maintain in coyotes a fear of humans? The messages are confusing. Every news article quoting an expert like Dr. Gehrt saying people, even children, have nothing to fear from coyotes helps to cultivate the most benign response upon sightings. "Co-existing with Coyotes" warns "an indifferent attitude towards a coyote in your yard has a similar effect as feeding" (SPES 2007c) but does not clarify a need to scare coyotes anywhere else they are seen, whatever they are doing, whether in attack mode, early phases of "exploring" humans (staring intently), or napping in a park or other public place. Should one match force with force, as in the self-defence sections of the *Criminal Code of Canada* (Criminal Code 1985)? Adults and, impossibly, small children are told to make themselves "Big Mean and Loud" to perform the program's "simple and safe response...to any coyote" (SPES 2006). Pelting balls and rocks, "waving" hockey sticks, and firing bear spray are all fair hazing techniques suggested on the website and downloadable "Parent Advisory Committee Kit" (SPES 2007a,c); but Timm et al. (2004) discuss the limited effectiveness over time, even futility, of non-lethal hazing:

"McCullough (1982) has noted that over time bears and other wild animals can habituate to stimuli (e.g., attempts at hazing) in the absence of a punishment. That is, the animal will, after repeated exposure to the stimulus, cease responses that are inappropriate or not adaptive (i.e., the animal will not expend time and energy in escape behavior). This concept would seem to apply to coyotes. Bears can make complex evaluations of benefits and risks. For example, instead of simply fleeing from an encounter [with a human], a bear may back off and wait and, by persistence, obtain the food reward. Thus persistence and a variety of strategies for obtaining food in the face of risks are learned because they are rewarded. Indeed,

<sup>75</sup> In the GVRD, voles are not associated with "urban / rural" or "built environments", although deer mice are linked to those ecosystem classes. The habitat requirements for GVRD vole species are "herbs / grasses" (old fields, pasture, and cropland), "wetlands", and "forest" (Lee and Rudd 2003, Appendices A, F).

ingenuity is fostered. In the absence of punishment, the bear becomes habituated to the human, and its declining perception of risk leads to a greater frequency of obtaining the reward, a self-reinforcing process' (McCullough 1982:29).

"McCullough goes on to state that when habituated bears become a problem, negative conditioning is needed: '...successful negative conditioning must involve fear, perhaps pain...' However, '...it would be difficult to punish bears severely enough to overcome behavior positively reinforced for long periods of time... Bears in long contact with humans are likely to remain incorrigible and will likely have to be removed in most cases' (McCullough 1982). While Jonkel (1994) describes successful efforts in Montana to re-instill fear of humans into problem grizzly bears (*Ursus horribilis*), the cost of such treatments—involving capture, treatment, and release—can reach \$6,000 per animal and therefore would be prohibitive to apply to suburban coyotes." (Timm et al. 2004)

This research indicates the most violent hazing method allowable in a city should be attempted upon any coyote, or other dangerous wildlife, sighting. If so, "coexistence" practised correctly forces people to engage in cruel behaviours that could cause prolonged suffering to the target animals. Civilized people go to considerable lengths to suppress such conduct in themselves and their children.

### **Coyotes and People – Legalities**

The B.C. Government's 24-hour Wildlife-Human Conflict Call Centre number is on the "Co-existing with Coyotes" website and in the recorded phone message, as expected through the partnership. However, there is no link to the B.C. Trappers Association website or other indication that trapping coyotes is legal in Vancouver, even out of season (B.C. Wildlife Act 1996: Sects. 26.1,2; 41.c,d; Ministry of Environment 2008a).

### **KEEP THEM STUPID – SIMPLE!**

"Kellert et al. (1996) provide general recommendations to increase public acceptance of carnivores. They emphasize that rather than simply providing more factual information on a species, education should directly target negative attitudes or perceptions concerning carnivores. For instance, in southern California we could focus on the public's negative, and often exaggerated, beliefs concerning the threat of predators to humans and pets. Potential educational options include information dispersed through the local media, distribution of pamphlets and flyers to residents bordering natural areas, and the development of local school programs. Kellert et al. (1996) also stress that education must emphasize all values represented by these species. Although the importance of predators is often couched in terms of their presumed ecological or economic significance, we must emphasize also the many aesthetic, visceral, and even spiritual values provided by these

charismatic animals." (Crooks 1998)

A rural version of "coexistence" has been pushed on British Columbia's farmers. However, the well-recognized pro-predator and environmental groups behind that initiative<sup>76</sup> are at least forced to contend with politically aware stakeholders like the B.C. Cattleman's Association. As a result, even with policies formulated "to protect the predator populations rather than to protect livestock or game" (BCAC 2004:7), the government still considers threats to livestock a valid concern (see Ministry of Environment 2002).

Ranchers were struggling with the effects of predators long before "rewilding" was around; but in cities, predator advocates always arrive with or before the predators. Working on their side is that historically, cities have been hubs for the anti-hunting movement (Threlfall 1995:45,49) and today are filled with people holding high moralistic and low utilitarian attitudes toward animals (Kellert and Berry 1980) caused by long disconnection from food production – the Safeway deli aisle and upscale restaurant are as far from scenes of domestic as wild slaughter. Working against urban predator eco-marketing is that people always did like cats and dogs a lot more than coyotes (Kellert and Berry 1980:34-35) and affection for pets has increased tremendously in the years since Kellert and Berry (1980:7) found humanistic attitudes toward animals to be strong and pervasive. Cats are America's (APPMA 2005a), and the world's (Serpell 2000:191), most popular pet. Three-quarters of dog owners and more than half of cat owners consider their pet like a child or family member (APPMA 2005b). "In 2002, *American Demographics* reported that 83 percent of American pet owners call themselves their animal's 'Mommy' or 'Daddy', up from 55 percent in 1995" (Schaffer 2006). As pets become children – as mere Cats Indoors! becomes Kids Indoors! – the Josef Fritzl-style Nazism (see Miller 2008) of strict confinement in the name of "protection" may come into sharper relief.

Cats and dogs are the "urban livestock", and the interests of pet owners are more realistically allied not with pro-coyote activists but with the ranchers, trappers, and hunters urbanites love to hate. Ironically, ranchers are no more than the hit-men hired by city dwellers (only 2.3% of Americans are vegetarian) (Stahler 2006) and North America's hunters and trappers are among the truest conservationists of all (Geist 2004a,b; Geist and McTaggart-Cowan 1995, Poole 2007). There are 90.5 million owned cats in the United States and 73.9 million of the also-maligned dogs<sup>77</sup> (APPMA 2005a).

<sup>76</sup> Non-governmental environmental interests include the Sierra Club of BC/Canadianwolves.net, Defenders of Wildlife, Bear Trust International, and World Wildlife Fund Canada (BCAC 2004).

<sup>77</sup> The pet-as-disease-vector biohazard takes over where predation on songbirds leaves off. For example, wolf expert Paul Paquet blames dogs for spreading viral diseases to northern coastal B.C. wolves (see Read (2006) even though Zamke et al. (2004), in a 16-year survey of canid infectious diseases in wolves in nearby Alaska and Yukon, found a high prevalence of canine distemper virus antibodies in wolves despite no known disease outbreaks in domestic dogs; a prevalence of canine parvovirus antibodies in wolves that was high near human settlements where dogs were found but even higher in remote areas; and a prevalence of infectious canine hepatitis virus that had been high in northern wolf populations for many years with minor increases that could not be explained by either introduction of the agent into an immunologically naive population or increases



Collectively, that is more than 5 times the human population of Canada. That is a lot of untapped bargaining power. Coyote advocates know the urban pet could be the urban coyote's downfall.

### Son of Soulé

There is an intriguing piece of information in Crooks and Soulé (1999). It refers to a separate experiment Crooks did in the same California canyon habitat islands amid urbanization he was studying with Soulé, whereby "25% of radio-collared cats were killed by coyotes (K.C., manuscript in preparation)." When I read this, I was shocked. There are other studies with ominous coyote diet implications; but this wasn't scats, this was cats. Scat can leave some breathing space: hypothetically, at least, several scats could contain the same pet. At first, I had paranoid visions of San Diego animal shelter cats being purchased by Crooks, radio-collared, and dumped into unfamiliar and hostile coyote territory, but in "Tabby Go Home" Crooks confirms these were indeed "pet cats".

Personally, I would never put a collar of any sort on my cats, unless it was a choco-bladder (see later), let alone allow a university student who had just handed me a cat predation survey to attach one; but cat owners residing along these study canyons were very cooperative with Crooks. A total of 636 of them completed his surveys, and some, as mentioned earlier, even kept prey returns so he could check for native species (Crooks 1998, Crooks and Soulé 1999:565).

Crooks completed a detailed dissertation about these canyons (Crooks 1999), leading to the "Doctor of Philosophy in Biology" degree he now holds, but the thesis is all but silent on the radio-collars. In order to make sense of the 25% killed, a reader would need to know things like whose cats they were, how they were recruited, and how many cats took part in the experiment.

Barring my animal shelter conspiracy theory, the most logical reason this manuscript has never been published is that Crooks had second thoughts about the advisability of pursuing a matter that, as in the quote from "Tabby Go Home" at the top of this section, would simply provide "more factual information" and do nothing to reverse Californians' "negative, and often

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and decreases in prevalence related to acute epizootics. Environmentalists also hold cats responsible for directing disease to wildlife, with similar disputable assertions regarding the spread of feline leukemia to mountain lions – it was recorded once, in 1991, by Jessup et al. (1993) – and feline panleukopenia to the inbred-to-impotence-and-heart-failure Florida panthers – the actual study includes cats as one of many more probable sources (bobcats, minks, raccoons, foxes, otters) of this and other viruses in Florida panther habitat, with no direct evidence panthers had died of any of the diseases discussed (Roelke et al. 1993). Some reports that make such claims simultaneously blame cats for receiving the very vaccinations that prevent spread of these diseases because this, and other veterinary care, gives them an unfair advantage over wildlife (see Coleman and Temple 1996, Coleman et al. 1997). For another point of view, according to Canada's National Wildlife Disease Strategy, "Canada's capacity to manage important disease issues has been challenged in recent years by the number, complexity and magnitude of high-impact disease occurrences and the threat of bioterrorism... Approximately 70% of new or newly important diseases affecting human health and human economies worldwide are believed to have a wild animal source... The vast majority of emerging diseases of the past 50 years are infectious diseases of wild animals that have been transmitted to humans (termed zoonotic diseases or zoonoses), to domestic and zoo animals, or to both..." (Canadian Wildlife Service 2004:1,2,16).

exaggerated, beliefs concerning the threat of predators to humans and pets" (Crooks 1998). The "keystone predator" concept might not work very well if people actually knew the odds were 1 in 4 that their outdoor cats would be killed by urban coyotes, even though it was a good thing for the environment. Instead of embracing the coyote as "focal" (Crooks 1999:138) or "flagship" (Webber 1997:57) species, urbanites, not just in California but everywhere, might revert to the old way of thinking and insist on removal of coyotes forthwith.

Nowadays, as discussed earlier, coyote diet analyses show negligible consumption of pets. Quinn even re-crunched the urban scat data from his 1992 thesis, presenting it in a way that looks a little less gloomy for cats (see Quinn 1997). After the near disaster of the Crooks cat experiment, conservation biologists and experts in Human Dimensions must have vowed it would never happen again. Studies would be designed and interpreted more thoughtfully to highlight some other "pest" than cats as a major prey item. The recent Gehrt / Morey research is a good example. Their coyotes received much media attention as desirable Canada goose egg-suckers (e.g., Berger 2005, Downes 2005)<sup>78</sup> (though this is not as good as it first seems, since the predilection does not stop at non-endangered urban ground-nesters); but if the Gehrt team really wanted to document the extent of dogs, cats, and even rats in the diet of urban and suburban Chicago coyotes, they would have studied the problem coyotes – not wildlife preserve or village parkland coyotes but *real* urban coyotes. There is probably no better place in North America right now than Chicago to work with wildlife control officers, private trappers, and the University of Illinois, College of Veterinary Medicine to obtain and analyze the enormous cache of nuisance coyote stomachs arising there from the ongoing cull.<sup>79</sup>

### PETS FIRST!

The "Co-existing with Coyotes" momentum will prevail unless ordinary people protest in an organized manner. When normal citizens start to understand the flawed science, calculated marketing, dishonesty, and overriding politics that lead to the creation of policies that literally rip the heart out of the things they hold dear, they could lash back like Stockholm syndrome victims suddenly freed from their captors' spell. Only the hostage-takers – conservation and wildlife biologists, "environmental philosophers", "urban ecologists" – block the way to fair and creative urban coyote management. "Rewilding", the top-down movement of an ultra-rich, so-powerful-to-be-almost-invisible, anti-democratic landed elite, could be reversed by a bottom-up response.

There could be a non-profit society called Pets First! with branches across North America to ensure the recognition of pet-owners as stakeholders in future urban

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<sup>78</sup> Vancouver's former Canada goose problem also ended after the coyotes came. Only 388 Canada geese were relocated from Vancouver to the Fraser Valley in 1999, down from previous highs of up to 2,000, but Mike Mackintosh contended the Vancouver Park Board was responsible for the decline through use of a "benign birth control" program of shaking eggs to kill embryos (Inwood 2000).

<sup>79</sup> Morey (2004:38) admits, "Because we did not examine nuisance complaints of coyotes, we were unable to link what we believe is the potential for conflicts to actual conflicts."

wildlife negotiations. The Vancouver branch would ask for a grant to match that given to “Co-existing with Coyotes.” We would aim for complete disbanding of “Co-existing with Coyotes” since it has done nothing to protect pets from coyotes, though pets have probably buffered people from attacks (see Geist 2007, 2008). Pets First! would demand a conservation officer dedicated exclusively to the City of Vancouver. According to BCAC (2004:19), the B.C. Cattleman’s Association hires retired conservation officers through Big Red Consulting to do control kills, a system 41% more cost-effective than government delivery of the same service. The haphazard trapping now done by the Lower Mainland Trappers Association at the request of individual property owners and businesses is not strategic or sufficient, judging by the unrelenting citywide flutter of missing cat posters. Planned-out trapping for maximum effectiveness and safety to people and pets requires formal government cooperation and access to public lands.

The hunter’s axiom will be heeded: If you see a coyote during the day, there are too many coyotes. As coyotes are “naturally” timid, any coyote presenting itself in plain view should be considered habituated. Coyotes would be kept well below their vole-peak carrying capacities in accordance with Dr. Geist’s observation that ample wild prey reduces a predator’s need to “explore” humans (Geist 2007). The allowable coyote density in lush post-expansion areas like Vancouver would be scaled back to the sparse concentrations found in original arid rangelands. To discourage the new modes of fragmented territory utilization discovered by Morey (2004) and Gehrt (2006), the culling of transients (as wolves do) (Wildlife Conservation Society 2007) would be performed by humans instead. With or without these active measures, the “rebound effect” will always occur because things rarely go smoothly for large-ranging predators, not even in the urban jungle.<sup>80</sup> However, padded leg-hold trapping / euthanasia would reduce prolonged pain and suffering to coyotes and victimization and danger to the car drivers currently performing informal culls for predator-activist-fearing / -supporting municipal governments. Because all lives matter, Pets First! would ensure the number of stray coyotes euthanized before eating many pets, instead of a day or month later by “natural” mortality, never exceeds the business-as-usual numbers of dogs and cats killed in North American animal shelters (partial Canadian stats are available on request from the Canadian Federation of Human Societies, Ottawa, ON, <http://cfhs.ca/>). Strategic coyote culling along with activism to change outdated animal shelter practices will ultimately mean fewer

<sup>80</sup> For example, Chicago coyotes “generally have a 60% chance of surviving 1 year. This is higher than most rural studies where coyotes are exposed to hunting and trapping. Nevertheless, most coyotes die before reaching their second year. This is because many pups die from a variety of causes during their first few months outside the den... By far the most frequent cause of death for urban coyotes has been collisions with vehicles (50 to 70 percent of deaths each year). Other causes of death included shootings, malnutrition, and disease such as sarcoptic mange and parvo virus (four coyotes died from unknown causes)” (Gehrt 2006). Also recall urban California post-coyote-pup mortality in Riley et al. (2003).

animals, wild or domestic, will die.<sup>81</sup>

Pets First! would encourage people to read, observe, and think critically. This may be the only way to solve the paradox arising from the “new paradigm” (Curtis et al. 1997) of wildlife management wherein the most-emphasized part is Human Dimensions, which puts feelings and perceptions ahead of facts, while ecological understanding is broadened by rigorous application of the scientific method, not a market-based process. All coyote, bird, and cat research would be reviewed to assist people in challenging unsubstantiated anti-cat statements.

Pets First! would actively participate in experiments to reduce cat predation, even though it has little if any ecological impact. The “saved” “doomed surplus” could then die of more socially acceptable causes like competition, starvation, and disease. Good leads flowing from Woods et al. (2003) include promoting mild obesity in outdoor cats,<sup>82</sup> encouraging outdoor activity at night (in certified no-coyote zones only), and the strategic placement of no-spill bird feeders in yards to distract fit daytime cats from effective bird-hunting opportunities. Coyote-free cities in conjunction with early and low-cost spay / neuter programs would select for a desirable aging cat population instead of coyote-induced high replacement rates that skew demographics toward the young cats identified as better bird-catchers.

Reduced predation on birds is still unlikely to make deep ecologists abandon covert wars on cats using urban coyotes. Therefore, Pets First! would be forced to support death-by-chocolate predator toxicant technology. All outdoor cats would be fitted with the choco-bladder cat-collar device to teach stray coyotes fatal aversion therapy lessons about the acceptability of pets as urban food choices (idea based on findings in Johnston 2005).

Pets First! would also support creative experiments to end the need for culls. Neutered coyotes raised from birth with kittens and puppies<sup>83</sup> might function in adulthood as territorial kingpins to keep cities free of pet-eating coyotes. This idea is based on a behavioural experiment by Kuo (1930), who found only 3 out of 18 kittens raised with rats ultimately killed rats; and of those who did, none killed the type of rat with which they were raised. (A similar technique could be employed with kittens and songbirds.) A high-tech possibility would be to equip all urban coyotes with GPS collars with location data automatically downloaded to cell phones. A simple text message would warn of coyotes entering the relevant neighbourhood. Owners of cats and toddlers could gather them up as possible or stand ready with their “Co-existing with Coyotes” certified hazing arsenal of “can clangers”,

<sup>81</sup> Animal shelter politics, not public irresponsibility, stand in the way of ending pet homelessness / animal shelter euthanasia (Winograd 2007).

<sup>82</sup> While today’s trends in pet obesity are currently viewed only as a problem, stocks will skyrocket for the first company to create and market the higher-calorie Pro-Bird Formula cat food. An alternative cat food would reduce the desire to hunt by adding farmed invasive songbirds and mice to the ingredients – see Polsky (1975:90): “Many specific hungers exist...and it could well be that a rat, for example, that is apparently well-satiated on laboratory chow still has a specific hunger for mice (or perhaps some specific part of a mouse, such as the brain); hence it could be just this type of hunger and not hunger in a general sense which drives it to kill.”

<sup>83</sup> See cat-friendly “Charlie” at <http://dailycoyote.blogspot.com/>.

hockey sticks, and bear spray.

To complement the taxpayer-funded coyote art around the City of Vancouver (City of Vancouver 1996), a special grant to Pets First! would be used to construct sculptures inscribed with the names of the 10 or 20 thousand local pets sacrificed to Webber & Co. in the past decade; these memorials would double as cat-friendly escape structures and be placed in residential areas lacking appropriate fencing, trees, and other beneficial topography. Changes to city bylaws would be requested to freely allow residential fences higher than the current 4 feet front, 6 feet side or back (City of Vancouver 2003) – easily scalable even by a sick coyote (Barron 2006).

A section of the website would post quotes of the week from people gloating over pets killed by urban coyotes. Cat-hater discussion boards are easily found by doing an Internet search with keywords like “coyotes” and “Fluffy”.<sup>84</sup> It is this malicious and sadistic streak that most differentiates environmentalists, especially those who grew up in the world according to Soulé, from pet owners because the latter will always struggle with tough decisions about wildlife, while the former take delight in coyote predation on house cats and the devastation to families it causes. In fact, if governments decide to cull the coyotes they currently sanction in cities to cull the cats, pro-predator activists might be enraged enough to retaliate more directly, at least until some get caught.<sup>85</sup> There may not be as many deep ecologists as coyotes in any given city, but eco-marketing has been honed to a fine art in the years since Michael Soulé first spoke of its “heretical” use to recruit children and citizens to the cause. The contribution of environmentalist-provoked hatred of cats to sadism cases written off as “disturbed humans” is largely unexamined; but in Australia, cruelty has been directly linked to organized cat-demonizing campaigns backed by faulty science (see Hartwell 2003). Many apparent mutilations can be traced to coyotes (see Timm et al. 2007), but a recent Toronto cat torture case was defended as an artistic protest against consumption of factory-farmed animals (Cinemuerte VII 2005), a mixed animal rights / environmental issue.

## COYOTE GO HOME

Conservation biologists and others catering to the “rewilding” movement and its elitist sponsors now work within and alongside governments across North America. They have misleadingly reframed both urban wildlife management and companion animal welfare as environmental issues and rely on flawed science, pseudoscience, and speculation for their presumption that wild predators are always beneficial to cities, and pets harmful. Capitalizing on and perpetuating the lag in citizens’ understanding, they assist coyote range expansion to new locations. As coyote populations become entrenched, these predator advocates call upon the human “population explosion” and “urban sprawl” to

easily introduce the idea that always we, never coyotes, encroached and that “coyotes are here to stay”. Along with other anti-cat activists, they have little tolerance for outdoor cats or insight into their individual needs, and they rejoice when coyotes kill them. In penitence for our ancestors’ real or spin-doctored mistakes, they demand we activate the ticking time-bomb called “coexistence” and adopt an extinction-of-humans death-wish religion where one accepts, even welcomes, wildlife attacks on people and pets.

Urban wildlife management strategies that degrade human values and cause pointless danger, suffering, and loss do nothing to improve the environment. Cities are not for the Third Worldness of the Wild Kingdom, but for technology and the human ingenuity that will continue to solve the earth’s challenges. Above all, cities should be places where families matter, where communities strive to be safe for all – for aging parents, for the disabled, for children, and for the pets that give and receive a unique and exceptional form of companionship and love.

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<sup>84</sup> “Fluffy” applied to cats has become the animal equivalent of a racial slur in humans, and journalists and others who use the epithet are universally anti-cat and pro-coyote.

<sup>85</sup> We learn from Dave Foreman’s example that Earth First!ers will do whatever the prosecutor tells them to avoid the Cons Indoors! program (see footnote #15).

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