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# Green Infrastructure and Urban Wildlife: Toward a Politics of Sight

Introduction. Contemporary urban ecologies are astonishingly hospitable to wildlife (Adams; Blaustein; Gehrt, Riley, & Cypher; Schilthuizen). The "rewilding" of cities is a global phenomenon, and the dynamics of human-wildlife relationalities exhibit considerable social, cultural, racial, ecological, spatial, and species variations in different parts of the world (Barua & Sinha; Hovorka; McKiernan & Instone; Yeo & Neo). In the United States, wild animals are thriving in many postindustrial cities whose ecologies have been transformed by significant changes in urban land use, including urban greening. Wild animals have taken advantage of a myriad of friendly spaces created by ecologically restored waterways, parkland, backyards, urban farms, community gardens, green roofs, rain gardens, and other greened spaces that are rewilding cities through provisioning wildlife in unexpected places (Aronson et al., "Global Analysis"; Ives et al.). As U.S. cities invest in green infrastructure to ameliorate environmental harms, wildlife large and small is occupying novel urban ecological niches located outside large city parks and designated nature preserves. As a result, human-wildlife encounters are becoming more frequent in neighborhoods where such encounters used to be uncommon. Increased sightings of urban wildlife, however, do not imply greater legitimacy for wild animals. Increasing abundance alone does not mean residents will necessarily welcome daily interactions with wild animals (Cox & Gaston). Rather, encounters with urban wildlife prompt a wide range of human responses. Some city residents are rattled by the proximity of wild animals, particularly by predators such as coyotes, foxes, and raccoons they see as "invading" their neighborhoods, while others relish encounters with this wildness next door (Correal; Soulsbury & White).

This essay starts from the premise that city-scale urban greening amounts to redesigning cities as if they were *meant* to attract wildlife — as if urban rewilding advocates were actually being heard (The Nature of Cities) — even though creation of wildlife habitat does not typically top the list of ecosystem services U.S. municipal agencies wish to promote. Insofar as green infrastructure development is responsible for the proliferation of wildlife, however, this urban transformation calls for a reckoning with the question of whether cities that are now teeming with wildlife are also cities *for* wildlife; and, to the extent they are not, for theorizing forms of human-wildlife coexistence in urban settings. The cultural and political challenges of urban biodiversity have spurred theorizing about zoöpolis in diverse fields, including cultural geography

(Hinchliffe & Whatmore; Rutherford; Wolch), conservation science (Aronson et al., "Biodiversity"; Beatley & Bekoff), wildlife management (Adams) and political theory (Donaldson & Kymlicka). The shaky legitimacy of urban wild animals has been tied up with their everyday invisibility — interrupted, for the most part, only when they enter humans' field of vision, often as "nuisance" animals (Donaldson & Kymlicka). Green infrastructure development, however, is disrupting invisibility as the default mode of urban wildlife, at least for many terrestrial species. In the wake of green infrastructure development *sightings* of urban wildlife have become routine. Yet *perceptions* of wildlife as intruding on human spaces have proved remarkably persistent, particularly regarding occasionally troublesome species (Couturier; Luther) and species widely despised as "trash" animals (Biehler; Nagy & Johnson). Nonhuman charisma is deeply implicated in matters of negotiating human-wildlife coexistence (Lorimer, "Non-human charisma").

I examine these cultural and political challenges of urban biodiversity through the lens of the City of Philadelphia's city-scale green infrastructure program, Green City, Clean Waters, one of the most ambitious such undertakings in the United States. I begin by showing how urban greening has undermined the plausibility of the prevailing approach to governing urban wildlife: animal control. Animal control's origins in untenable nature/culture binaries, I argue, imply not only conceptual confusion in the face of the blurring of human-wildlife boundaries facilitated by urban greening. As a practical matter, its emphasis on discouraging interactions between people and animals in order to minimize human-wildlife conflict falls short in neighborhoods where communities of wildlife are thriving close to home. Where "everyday invisibility" is no longer the norm for urban wildlife, I argue, animal control is increasingly rendered absurd. But what is to take its place, and what role does visibility play in rethinking human-wildlife interactions? To help define a legitimating role for visibility in cultivating more convivial urban human-wildlife relationalities, I turn to David Schlosberg's analysis of the "politics of sight." Though he is not concerned with animals per se, Schlosberg hopes to identify strategies for visualizing ecological entanglements and relationships of mutual interdependence between humans and nonhumans that are typically invisible. His tracing the everyday invisibility of humans' embeddedness in nonhuman ecological processes to what he calls a culture of *learned disappearance* sheds light on why abundance of urban wild animals does not necessarily entail their accommodation as urban dwellers. Based on Schlosberg's environmentalist politics of sight, I examine a number of self-consciously urbanist practices of engaging with urban wildlife - bird walks, nest-cams, wildlife photography - that strive to close this gap by visualizing wild animals as co-travelers and fellow urban dwellers.

Urban Greening: Implications for Animal Control. The City of Philadelphia is mandated by the U.S. Environmental Protection Agency (EPA) to invest some \$3 billion in green infrastructure by the mid-2030s in order to bring the city into compliance with federal water quality standards, now routinely violated during heavy storms when untreated runoff and combined sewer overflows exceed the capacity of water treatment plants and are diverted into creeks and rivers. Installation of "green" infrastructure (e.g. parks, rain gardens) rather than traditional "gray" infrastructure (e.g. underground holding tanks) is expected to produce, at roughly the same cost, a variety of "triple bottom line" economic, social, and environmental benefits (Philadelphia Water Department 18-19). "Wildlife benefits" rarely appear in the city's green infrastructure policy documentation but number among the anticipated ecological consequences of green infrastructure: "Stormwater wetlands are one of the best stormwater management tools for pollutant removal and can provide considerable aesthetic and wildlife benefits" (23; emphasis added). According to the EPA, city-scale green infrastructure implementation is expected to support increased populations of wildlife and to facilitate wildlife movements and connect wildlife populations between habitats (Chunn-Heer). Philadelphia's commitment to manage urban runoff by reengineering approximately a third of the city's surface area will improve wildlife habitat and increase habitat connectivity.

This green infrastructure initiative is being undertaken by a postindustrial city whose approach to wildlife management reflects the sanitary cities movement's emphasis on separating humans from waste and from animals in the name of public health (Gandy; Melosi). Insofar as there is a municipal wildlife management policy system, it is fairly decentralized, involves autonomous agencies pursuing sectoral agendas, and has limited resources. Its key components are vector control focused on zoonotic disease prevention (e.g. mosquito spraying, rodent control) and animal control focused on sheltering stray cats and dogs. Natural lands management by the Philadelphia Department of Parks and Recreation (PP&R) includes managing several thousand acres of the Fairmount Park system as wildlands and urban forest, including biodiversity promotion and protection; the department operates three environmental education centers located in the park. Philadelphia Water (PWD) monitors aquatic species in municipal waterways. PP&R and PWD each partner with "friends of the park" organizations and other community partners to maintain parks and green infrastructure, including organizations interested in promoting urban biodiversity.

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The nonprofit organization Animal Care and Control Team of Philadelphia (ACCT Philly) is responsible for municipal animal control operations. ACCT Philly operates a shelter for unwanted pets, but its animal control responsibilities occasionally also extend to wildlife, particularly to raccoons, which generate the most nuisance wildlife complaints in the city. Visitors to the agency's website are informed that removing unwanted wildlife from a residence is generally the property owner's responsibility. However, there are two conditions under which ACCT Philly will respond to a wildlife complaint: if the animal is in a common area of the home, such as the living room or bedroom; or if the animal appears to be injured or sick, whether it is found inside or outside of a dwelling. Less proximal encounters, such as dealing with an animal "located in the walls, attic, or roof areas of a dwelling (or any other areas that are not common areas)," are the homeowner's responsibility.

Close encounters with raccoons inside a residence put young children and older adults with limited physical mobility at some risk of infection or injury. Residents of impoverished neighborhoods in particular may lack the resources to exclude unwanted animals from poorly maintained rental properties. In December 2017, for example, a 4-month-old infant was mauled in an apparently predatory attack by a raccoon in her North Philadelphia bedroom. The girl required surgery to fix numerous facial lacerations (CBS News). Visitors to ACCT Philly's website learn that indoor encounters with bats can also be cause for concern. Bats roosting in attics sometimes find themselves trapped inside homes, and a bite from a rabid bat can transmit rabies. As with other wildlife, ACCT Philly will not respond to a complaint unless the bat is found in a common area of the home, though residents are advised to report such incidents to the Philadelphia Department of Public Health's Division of Disease Control "if the bat was in a room where someone was asleep or where there were young children present" (ACCT Philly).

Home-invading raccoons and bats aside, Philadelphia's animal control agency concedes the legitimacy of urban wildlife — up to a point. The public is told the mere presence of wildlife is not in itself a cause for alarm. Rather, it is "not uncommon to observe wildlife walking about on neighborhood streets — even during the daylight hours" (ACCT Philly). However, this sensible explanation of the routine habits of wild animals and the corresponding recognition of their presence in the city as legitimate are followed by advice for residents who are concerned about wildlife near their home. Residents who wish to deter wildlife are advised to secure their trash, to leave no food outside, and to keep their home in good repair to keep animals out: Healthy wildlife is found in yards, streets, parks, etc. These animals should be left alone and trapping of healthy wildlife is prohibited under state law with the exception of certain, special circumstances. [...] Use the resources provided above to deter these animals from frequenting your neighborhood. (ACCT Philly)

Recommending that residents minimize wildlife attractants around their homes to prevent habituation and prevent human-wildlife conflicts is considered good urban wildlife management practice (Adams; Gehrt, Riley, & Cypher). I do not want to suggest that urban greening has undermined the case for secure garbage cans and sensible home repair. However, the logic of declaring urban wild animals as legitimate yet also unwanted is stretched rather thin by the proliferation of urban wildlife. In the animal control agency's spatial framing of the legitimacy of urban wildlife, sightings of wild animals are unremarkable unless they enter spaces understood to be primarily human spaces; the legitimacy of their presence diminishes with increasing proximity to neighborhoods and to people's homes. This is the "brittle legitimacy" of urban wildlife noted by Donaldson and Kymlicka:

Whatever our mistreatment of domesticated animals and of wilderness animals, there is at least a grudging recognition that they have a right to be where they are. But the very idea of liminal animals — of wild animals living amongst us — is seen by many people as illegitimate, and as an affront to our conception of human space. (211)

Such spatially dualist human-animal relationalities might have been adequate at a time when urban wildlife abundance was low and encounters with wild animals in U.S. cities were few and far between. In our contemporary greened cities, however, the idea that the very same wild animals that routinely occupy "yards, streets, [and] parks" may also be deterred from "frequenting your neighborhood" is ecologically dubious, if not increasingly absurd. Given the inextricably intertwined human-wildlife urban geographies being created by urban greening, encountering wild animals in your neighborhood is no longer a rare experience. While dualist urban human-wildlife geographies have always been questionable — "Wild animals live, and have always lived, amongst us" (210) — the contemporary permeability of the urban/wild divide is arguably a notable departure from the more sharply demarcated boundaries that held for much of the 20th century. The environmental historian Ellen Stroud, for example, has documented this blending of human and nonhuman worlds in the landscape of contemporary New England. Much of what is politically contentious about urban

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wildlife, she contends, revolves around questions of belonging provoked by this increased permeability of the built environment to encroachment by wild animals. The resulting indistinctiveness of human and animal worlds is experienced as unsettling by some because it undermines longstanding conceptions of cities and suburbs as spaces intended to satisfy primarily human needs:

Malls, trees, cars, pet rabbits, and roving carnivores are all part of the twenty-first century northeastern landscape, one in which the boundaries between city and hinterland are not nearly so stark as some would imagine or wish them to be. Sprawling suburbs have become part of the sprawling woods, with corridors of wildness connecting city and forest, sometimes seeming to threaten both. (Stroud 145)

**Urban Wildlife and the Politics of Sight.** Many urban dwellers experience encounters with wild animals on their doorstep as troubling interruptions of daily life, but it is precisely this blurring of human-wildlife boundaries that creates awareness of their collapse and, from time to time, generates calls for their restoration. In January 2017, for example, Philadelphia city council member Kenyatta Johnson called for an investigation into the abundance of raccoons: "There has to be a reason they're coming out of nowhere infesting these neighborhoods" (Loeb). Humans react to cohabiting with wild animals in complicated ways, but the intensity of city residents' love-hate relationship with raccoons may be unrivaled (Dempsey) given their penchant for ignoring the boundaries of spaces intended by humans for our own exclusive use and for provoking strong feelings of either solidarity or hostility (Luther). Some other urban-tolerant species, in contrast, are relatively well liked. White-tailed deer, for example, rarely encounter intense hostility from city residents, even though they cause substantial property damage (Cornue & Beck).

Such differences are attributable, at least in part, to the influence of nonhuman charisma on human emotional responses to encounters with wild animals. Lorimer's (2015, 2007) influential relational conception of nonhuman charisma includes ecological, aesthetic, and corporeal dimensions. Ecological charisma refers to the degree to which an organism may be detected by a human observer using their senses, with minimal technological assistance (Lorimer, *Wildlife* 40). Some terrestrial species such as raccoons, coyotes (Hunold & Lloro-Bidart), and red-tailed hawks (Hunold) enjoy high ecological charisma, compared to, say, fish and deer ticks. Emotional responses to wildlife go beyond mere detection, however. "Aesthetic and corporeal charisma," Lorimer explains, describe the properties of organisms that generate emotional responses among humans encountering them. Aesthetic charisma relates primarily to encounters with visual media or certain spectacular modes of ecotourism. Corporeal charisma is concerned with feelings generated in proximal encounters in the field. (*Wildlife*, 44)

Just as human valuation of urban wildlife is rather variable, the relationship between urbanization and animals' visibility is far from straightforward. Generally speaking, urban ecologies tend to favor generalist species with flexible habitat and food requirements. With their hustle and bustle and the demands they place on animals to negotiate human technologies such as road traffic, cities favor adaptability as a survival trait (Schilthuizen). In their efforts to outwit "raccoon-resistant" garbage cans, for example, Toronto's raccoons have shown greater curiosity and success at problemsolving tasks than their rural cousins (Dempsey; Isabella). Coyotes in Chicago and Denver have learned to "hide in plain sight" in very close proximity to people by paying close attention to human behavioral patterns, recurring schedules, and traffic patterns, and then adjusting their movements accordingly (Gehrt, Brown, & Anchor; Poessel, Breck, & Gese). The majority of mammals faced with human disturbance practice some degree of temporal avoidance by increasing their nocturnality, as compared to baseline activity patterns of wilderness populations of the same species (Gaynor et al.).

These examples indicate purposeful concealment remains a viable behavioral option even for urban-tolerant animals with a fairly large body size. And while access to areas (and times) that are relatively free from human disturbance is clearly important for wild animals' wellbeing, I want to suggest that invisibility is something of a double-edged sword from the perspective of social justice. In human struggles for social justice, culturally mediated invisibility is heavily implicated in oppressed minorities' lack of recognition by the majority society and, as such, often a formidable barrier to attaining moral and political equality. Because visibility is such a powerful basis on which to assert membership in the wider society, political struggles for equality involve making claims to have one's existence and way of life acknowledged, to be seen (and heard) by the majority. Physiological and psychological needs for seclusion aside, it is not clear why this should be fundamentally different for wild animals' claims to membership in urban society — if very risky for especially reviled species, given that, for example, increased sightings of brown rats trigger the deployment of rodenticide bait boxes in most U.S. cities.<sup>1</sup> Wild animals' recognition as urban dwellers entails being perceived,

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by their human neighbors, as inhabiting urban spaces on their own terms as opposed to being regarded as out of place, particularly in parts of the city located outside designated parks or nature preserves.

An ongoing scientific reappraisal of urban ecologies as valuable repositories of biodiversity (e.g. Aronson, et al., "Global Analysis"; Braverman; Buller, "Animal geographies I,""Animal geographies II"; Lorimer, Wildlife 161; Standish, Hobbs, & Miller) has established that cities are fully a part of nature and, further, that nonhuman nature in the city is not confined to parks or to a few precious relicts of native ecosystems (Karvonen; Kowarik). That said, installing green infrastructure does not by itself propel imaginaries of city life down the road from the "built environment" to "living cities," configured as less human-centric, more inclusive landscapes shared more equitably by their human and nonhuman residents (Braun; Frank; Hinchliffe & Whatmore; Wolch). What sort of cultural work might animate such more-than-human conceptions of urban life? How might human urban dwellers come to experience cities as being for wildlife, too? A more convivial relationship with "nature next door" (Stroud) would seem to be predicated on cultivating what the nature essayist Lyanda Lynn Haupt has called the attentive inhabiting of our home place, whereby human beings through experiential engagement with plants and animals become more receptive to the existence of the nonhuman world that surrounds us. The philosopher Lori Gruen has termed this relational sensibility entangled empathy:

an experiential process involving a blend of emotion and cognition in which we recognize we are in relationships with others and are called upon to be responsive and responsible to another's needs, interests, desires, vulnerabilities, hopes and sensitivities. (Gruen 3)

As important as a willingness to extend ethical consideration to nonhuman lives may be, what is at stake in developing a societal capacity to experience wild animals as genuine city residents surely is not exclusively (or even primarily) a matter of individual transformation. To helps us think about this collective dimension of inhabiting our home place more attentively, I want to enlist David Schlosberg's proposal for a "politics of sight." For Schlosberg, sight is political because politics, broadly conceived and culturally mediated, structures what people see and what they do not see. What is visible and what remains hidden, Schlosberg contends, is the result of collective learning, including formal education and cultural communication in the wider society (see also Drew). To illustrate what he means by a politics of sight Schlosberg turns to China Miéville's science fiction novel *The City and The City* (2009), set in "two cities that actually share the same physical, geographical space; they can only exist as distinct from one another if the citizens of each learn to make the other city and its citizens invisible, even as they pass them on the street" (Schlosberg 203). That invisibility, Schlosberg notes, "is taught, expected, and enforced" in both cities. He suggests this "learned disappearance of things right in front of our faces is also applicable to our relationship with the nonhuman world" (204). Though Miéville's novel is not concerned with human-wildlife relations, Schlosberg's insight regarding the cultural dynamics of (in)visibility suggests how human-centric conceptions of city life based on problematic nature/culture binaries manage to persist despite the increasing abundance of urban wildlife.

Nature/culture dualisms enshrined in the dominant values of industrial society, Schlosberg contends, are very good at hiding these relationships from us, and so visualizing "the ongoing human relationship with the nonhuman" (202) is the task of a politics of sight. Engaging in this reconstructive work entails exploring nonhuman nature "not as a force apart from human culture, but as intertwined with it" (Buell 137). The degree to which existing institutions of ecological knowledge production and environmental education are allies in this cultural work is contestable (Dickinson; Henderson & Zarger). Historically, urban institutions created for the study and the enjoyment of nature have tended to reinforce the nature/culture binaries responsible for rendering urban wildlife invisible. By inviting people to spend time in natural areas set aside from the rest of city, spaces such as city parks, botanical gardens, and arboretums have unwittingly propagated a conception of nature as existing apart from, if not in opposition to, the city and its human residents. To visit nature, you must leave the city proper and enter a different realm that is curated to look, sound, and feel a certain way. In terms of enhancing receptivity to human beings' material embeddedness in the nonhuman world, this sort of spatial and experiential "museumification of nature" (Gobster) is problematic – yet powerful and persistent. Even the environmental education centers created in the era of modern environmentalism rely on this model of confining nature to the park-like settings in which such facilities are situated and where visitors are instructed, in classes or on field trips, how to experience the natural world, understood to be qualitatively different from the places where they live and work. Whether setting nature aside from the city and from human culture more generally can cultivate the development of "deeper and more mutual relationships with nonhumans" (Fletcher) is doubtful, however, because it removes possibilities of having meaningful encounters with nonhuman nature from urban dwellers' daily experience.

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Restoring such possibilities and fostering a more attentive inhabiting of the city as a space shared by people and by animals is the task of a politics of sight. Here I want to discuss some emergent practices of engaging with urban wildlife that seek to advance this cultural-political reconstructive work. Urban birding and urban wildlife photography, I contend, are practices of visualizing how wild animals inhabit the city that work against the spatial and experiential "museumification" of nature. Take urban birding. In Philadelphia, the BirdPhilly initiative, a collaboration by the Delaware Valley Ornithological Club, Philadelphia Parks and Recreation, and the Fairmount Parks Conservancy, hosts birding walks around town. Relevant for our purposes is that some of these walks do not take place in city parks but venture into less obvious urban spaces in search of birds. For example, a June 2017 "Parkway Raptors" walk held in Center City assembled at a red-tailed hawk nest on Eakins Oval, a public plaza located across from the Philadelphia Museum of Art in central Philadelphia. A dozen participants watched two robust nestlings hop around on a nest constructed in the crown of a mature red oak, before walking along the tree-lined Benjamin Franklin Parkway toward City Hall. Along the way, they encountered the female hawk perched in a plane tree, eyeing up a recently road-killed squirrel. The walk concluded at City Hall, where a peregrine falcon was seen flying high up among the downtown buildings, carrying a pigeon to the nest situated in an alcove at the base of the building's spire, 15 stories above street level. Faced with these encounters, participants were encouraged to interrogate "the learned disappearance of things right in front of our faces" (Schlosberg 204). Of course, the participants were already predisposed to doing so and were *hoping* to find birds of prey; joining a Saturday morning birding walk on the Benjamin Franklin Parkway for precisely this reason is arguably not an everyday activity. Raptors, moreover, are highly charismatic and their conflicts with humans in urban area are limited (Boal & Dykstra). Advocating for "unloved others" (van Dooren) or for aquatic or invertebrate species whose lives are considered expendable (Hatley) or that are simply difficult to observe in the field may be harder to conceptualize in terms of sight. Yet it is worth noting that the raptor walk participants experienced the Parkway not as most people do - say, as tourists visiting one of North America's venerable museum districts, or as commuters inching their way forward on a clogged arterial during rush hour — but as observers of vibrant bird habitat in downtown Philadelphia.

Digital photography is an increasingly popular form of experiential engagement with urban wildlife, including species that are not charismatic or beloved. In April 2019, for example, nearly 400 Philadelphia area residents took part in a four-day City Nature Challenge (Crall), an annual competition in which urban dwellers from around the world compete to identify as many species of wildlife in their city as possible using the

iNaturalist smartphone app. iNaturalist users post an image to the app, where identification may be crowdsourced and discussed. Getting participants to pay attention to frequently overlooked and unseen urban wildlife (e.g. sidewalk bugs) and to extend the conventional definition of nature to be inclusive of urban environments and urban wildlife were explicit goals of the competition. More than 1,000 species of plants and animals — weeds, wildflowers, trees, bugs, fungus, and wildlife — were logged in the Philadelphia region, the vast majority of animal species being invertebrates. The City Nature Challenge has generated citizen science data urban ecologists are starting to analyze (Leong & Trautwein).

Efforts to promote a more attentive inhabiting of our urban home based on a politics of sight do not have to rely on physical encounters with wildlife in the field, however. In fact, digital media can reveal wild animals as urban dwellers in ways not easily accomplished by direct observation. Wildlife photography and internet-enabled cameras that livestream the activities of wild animals are immensely popular and help bring the lives of urban wildlife to much wider audiences. The New York City photographer Lincoln Karim, for example, has documented the lives of red-tailed hawks in Central Park for nearly two decades, spending thousands of hours in the field. Many of Karim's images (and videos) show the birds perched on buildings or airborne against the backdrop of Fifth Avenue building façades, highlighting how these birds inhabit their urban home. Blogs that chronicle the lives of Pale Male's family, and those of hawk families in other cities, have a devoted following. People share their observations and their images on social media, and they discuss the hawks' lives and reflect on the role of wild animals in urban settings and on human-animal relationalities in anthropogenic landscapes more generally (Hunold). Nest cams, in particular, bring the lives of urban birds into the homes of millions of people. Several universities and museums have installed such cameras at red-tailed hawks' nests on their campuses. Individual birds such as Cornell University's "Big Red" and the Franklin Institute's "Mom" have attained astonishing levels of internet fame. Nest cams, it is worth noting, provide audiences with a type of genuinely unscripted reality TV rarely found on actual television, insofar as the story is not guaranteed to end well. Disease and death are as likely to shape the narrative as the successful rearing of the next generation of birds. The website for the U.S. National Arboretum's eagle nest cam in Washington, D.C., for example, contains the following statement:

This is a wild eagle nest and anything can happen. While we hope that all eaglets hatched in this nest will grow up healthy and successfully fledge

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each season, things like sibling rivalry, predators, and natural disaster can affect this eagle family and may be difficult to watch.

Nest cam operators occasionally face public outrage for showing the more gruesome aspects of the lives (and deaths) of wild animals (Brulliard), but educational institutions seek to balance the fun of broadcasting the birds' activities with relevant scientific information as, for example, online chats that allow viewers to interact with wildlife professionals knowledgeable about the birds' behavior and ecology. What makes these projects so fruitful for advancing a politics of sight around urban wildlife, however, is their normalization of wild animals as successfully inhabiting urban spaces that do not look anything like classic wildlife habitat.

Eagles and hawks, however, are classic examples of charismatic megafauna that also, for the most part, do not greatly inconvenience humans. They are widely admired, and occupy the opposite end of the spectrum of animals widely considered vermin (Biehler). As such, they are the low-hanging fruit of urban wildlife advocacy. Raptors, of course, do well in urban areas in part because their prey – rats, pigeons – is so abundant there. This very same prey abundance also attracts mammalian carnivores that provoke decidedly more apprehensive responses from humans. Take, for example, attitudes toward coyotes, wild canids that are becoming more common in cities across North America (Couturier; Van Horn). Promoting peaceful coexistence with this awkward species, admired by some and hated by others, is a more difficult challenge. As apex predators – animals that have no natural predators themselves – coyotes may be appreciated when they help control abundant populations of geese or scavenge animal carcasses, but as occasional killers of backyard chickens and beloved pets this very same quality makes some residents wary of their presence (Elliot, Vallance, & Molles 1345; Hunold & Lloro-Bidart). Wildlife experts, such as the biologists of the long-running Cook County Coyote Project in Illinois, do not dismiss human-coyote conflicts that do occur - some coyotes do kill pets - but they emphasize that the term "nuisance covote" is used more expansively than is warranted by the data: "There are also many levels of nuisance, with the term itself being highly ambiguous; only a very small population of covotes appears to be causing actual conflicts with humans." This observation appears to hold not just in Chicago. In his natural history of the coyote, Flores notes the emergence of a *modus vivendi* in cities with long-established populations of coyotes: "Plenty of LA residents still hate them, but in a pattern that urban coyote researchers are finding increasingly common [...] urban people get used to covotes" (201).

More tolerant attitudes toward urban wildlife ranging from indifference to curiosity to a desire for peaceful coexistence with at least some wild animals are becoming more widespread (Pratt-Bergstrom). In this context, it is instructive to ask how visual media campaigns on behalf of urban wildlife are seeking to move potentially troublesome species such as coyotes out of the nuisance animal category, and to reimagine cities as spaces both for people and for animals, including wild predators. In San Francisco, the amateur wildlife photographer Janet Kessler has for the past decade immersed herself in the lives of several coyote families that inhabit a number of city parks and surrounding neighborhoods. Her sparsely edited documentary images strive to bridge the gap between the animals as they are in a lot people's head (scary wild predator) and the animals as they really are (family-oriented canid harmful mostly to rodents, though not overly friendly toward domestic dogs.) In terms of advancing a politics of sight, Kessler's work matters because it shows coyotes doing things in spaces that are distinctively urban and that we tend to think of as existing primarily to satisfy human needs: coyotes crossing a road, jumping a guardrail, sniffing a car tire, observing a neighborhood, watching pedestrians walking on a trail, and so on. Kessler's body of work also includes more classically naturalistic depictions of coyotes pouncing on voles and of coyotes interacting with one another, but she does not erase human-made structures from her images, objects that are often banished from wildlife imagery. In resisting this elision of the human-made she sets aside powerful stylistic conventions in wildlife photography and filmmaking that typically showcase wild animals in decontextualized naturalistic settings. In Kessler's images, to the contrary, a city street or a front yard is revealed to be an unremarkable part of the animal's home, showing that coyotes inhabit the very same spaces as their human neighbors. That said, though Kessler admires coyotes and welcomes their presence in the city, she takes great care to avoid romanticizing them and does not downplay their wildness and their basic indifference to us. In keeping with this stance, her public education and outreach website "Coyote Yipps" dispenses practical advice for handling potentially troublesome encounters with urban covotes in the dispassionate informational tone cultivated by government wildlife agencies.

The Urban Coyote Initiative, founded by San Francisco wildlife photographer Jaymi Heimbuch, draws more evenly on art and on science to visualize how coyotes inhabit urban spaces. This slick multimedia production employs the tools of high-gloss photojournalism to document the work of leading coyote researchers in the field and in the lab, while pulling out all the stops of fine art and street style fashion photography (vibrant colors, wide open apertures, soft backgrounds) to make images of city coyotes that take your breath away. Here, the stylistic conventions of traditional wildlife

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photography are not so much discarded as weaponized, inviting the audience to marvel at the sheer delightfulness of these wild canids roaming the streets of urban North America. Viewers are given greater license here than by Kessler's work to engage affectively with the animals. The writing, an assortment of science reporting, personal field journals, and educational materials, has more in common with the lyrical nature writing of an Akiko Bush than with a game commission fact sheet. Heimbuch and her collaborators are not bashful about their desire to move coyotes squarely into the charismatic megafauna column of the urban bestiary; their portrayal of urban coyotes as beautiful and intelligent social mammals practically makes you long for the day the animals will finally discover your neighborhood too.

**Conclusion**. Calls to reestablish firm human-wildlife boundaries amidst the increasingly intertwined human-animal geographies being created in greened cities give voice to wildlife-related anxieties borne of this urban transformation, but they are trapped in unhelpful nostalgia. Proposals to accommodate wild animals as urban dwellers that acknowledge the mutually entangled human-animal relationalities in greened cities and that incorporate some form of wildlife advocacy into green infrastructure development offer a more promising path forward (Rutherford). Urban bird walks, nest cams, and wildlife photography strive to reveal to human audiences the ways that animal geographies overlap with human geographies, outside the confines of designated natural areas, opening up possibilities for city residents to cultivate "deeper and more mutual relationships with nonhumans" in everyday life (Fletcher). In its insistence that cities are for animals too such a politics of sight helps loosen the stranglehold on our collective imagination of the legacy of "partitioning the environment into dichotomous categories" (Hobbs et al. 557) whereby nature is parceled off from the city and from human culture more generally.

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### Note

1. The movement to replace integrated pest management with non-lethal methods is in its infancy. The California city of Malibu in June 2019 voted to eliminate pesticide use for rodent control on municipal properties (Sawiki).

#### Works Cited

Aronson, M. F., Lepczych, C. A., Evans, K. L., et al. "Biodiversity in the city: Key challenges for urban green space management." *Frontiers in Ecology and the Environment* 15.4 (2017): 189-196.

Aronson, M. F J., La Sorte, F. A, Nilon, C. H., et al. "A global analysis of the impacts of urbanization on bird and plant diversity reveals key anthropogenic drivers." *Proceedings of the Royal Society B: Biological Sciences* 281.1780 (2014): 20133330.

ACCT Philly. "Raccoons & Wildlife." n. d. Accessed 29 June 2019. Online.

Adams, C. E. Urban Wildlife Management. 3rd edition. CRC Press, 2016.

Barua, M. & Sinha, A. "Animating the urban: an ethological and geographical conversation." *Social & Cultural Geography* (November 2017). Accessed 29 June 2019. Online.

Beatley, T. & Bekoff, M. "City planning and animals: Expanding our urban compassion footprint." *Ethics, Design and Planning of the Built Environment*. C. Basta & S. Moroni, eds. Springer, 2013. 185-195.

Biehler, D. D. Pests in the City: Flies, Bedbugs, Cockroaches, and Rats. U Washington P, 2013.

Bird Philly. "Map." n.d. Accessed 29 June 2019. Online.

Blaustein, R. "Urban biodiversity gains new converts." Bioscience 63.2 (2013): 72-77.

Boal, C. W. & C. R. Dykstra, eds. *Urban Raptors: Ecology and Conservation of Birds of Prey in Cities.* Island Press, 2018.

Braun, B. "Environmental issues: writing a more-than-human urban geography." *Progress in Human Geography* 29.5 (2005): 635-650.

Braverman, I. Wild Life: The Institution of Nature. Stanford UP, 2015.

Christian Hunold -- Green Infrastructure and Urban Wildlife: Toward a Politics of Sight

Brulliard, K. "People love watching nature on nest cams — until it gets grisly." *The Washington Post* May 19, 2016. Accessed 29 June 2019. Online.

Buell, F. "Nature in New York: A brief cultural history." *Still the Same Hawk*. J. Waldman, ed. Fordham UP, 2013. 122-146.

Buller, H. "Animal geographies I." Progress in Human Geography 38.2 (2014): 308-318.

Buller, H. "Animal geographies II: Methods." *Progress in Human Geography* 39.3 (2015): 374-384.

Busch, A. The Incidental Steward: Reflections on Citizen Science. Yale UP, 2013.

Chunn-Heer, J. "EPA articulates the multiple benefits of green infrastructure." *Surfrider Foundation* March 19 2013. Accessed 29 June 2019. Online.

City of Philadelphia. *Greenworks: A Vision for a Sustainable Philadelphia* (2016). Accessed 29 June 2019. Online.

Crall, A. "Competition meets collaboration: The City Nature Challenge." *Discover Magazine* April 19, 2018. Accessed 29 June 2019. Online.

Cornue, R. & Beck, P. "Loving them and loathing them: Conflicting attitudes towards deer management alternatives in Central Texas." Paper presented at the Association for Environmental Studies and Sciences, Tucson, AZ, June 21-24, 2017.

Correal, A. "Raccoons invade Brooklyn." *The New York Times* January 1, 2016. Accessed 29 June 2019. Online.

Couturier, L. "One nation under coyote, divisible." *Trash Animals: How We Live with Nature's Filthy, Feral, Invasive, and Unwanted Species.* K. Nagy & P. D. Johnson II, eds. U Minnesota P, 2013. 107-123.

Cox, D. T. C. & Gaston, K. J. "Human-nature interaction and the consequences and drivers of provisioning wildlife." *Philosophical Transactions of the Royal Society* B373 (2018): 20170092.

Humanimalia: a journal of human/animal interface studies

Dempsey, A. "Toronto built a better green bin and — oops — maybe a smarter raccoon." *The Star* August 3, 2018. Accessed 29 June 2019. Online.

Dickinson, E. "The Misdiagnosis: Rethinking 'Nature-deficit Disorder." *Environmental Communication* 7.3 (2013): 315-335.

Donaldson, S. & Kymlicka, W. Zoopolis: A Political Theory of Animal Rights. Oxford UP, 2011.

Drew, J. "Rendering visible: Animals, empathy, and visual truths in the ghosts in our machine and beyond." *Animal Studies Journal* 5.2 (2016): 202-216.

Elliot, E. E., S. Vallance, & L. E. Molles. "Coexisting with coyotes (*Canis latrans*) in an urban environment." *Urban Ecosystems* 19.3 (2016): 1335-1350.

Fletcher, R. "Connection with nature is an oxymoron: A political ecology of 'nature-deficit disorder." *The Journal of Environmental Education* 48.4) (2017): 226-233.

Flores, D. Coyote America: A Natural and Supernatural History. Basic Books, 2016.

Frank, B. "Human–wildlife conflicts and the need to include tolerance and coexistence: An introductory comment." *Society & Natural Resources* 29.6 (2016): 738-743.

Gandy, M. Concrete and Clay: Reworking Nature in New York City. MIT Press, 2003.

Gaynor, K. M., Hojnowski, C. E., Carter, N. H., Brashares, J. S. "The influence of human disturbance on wildlife nocturnality." *Science* 360.6394 (2018): 1232-1235.

Gehrt, S. D., Brown, J. L., & Anchor, C. "Is the urban coyote a misanthropic synanthrope? The case from Chicago." *Cities and Environment* 4.1 (2011). Accessed 29 June 2019. Online.

Gehrt, S. D., Riley, S. P. D., & Cypher, B. L. Eds. *Urban Carnivores: Ecology, Conflict, and Conservation*. Johns Hopkins UP, 2010.

Gobster, P. H. "Urban park restoration and the 'museumification' of nature." *Nature and Culture* 2.2 (2007): 95-114.

Christian Hunold -- Green Infrastructure and Urban Wildlife: Toward a Politics of Sight

Gruen, L. Entangled Empathy: An Alternative Ethic for our Relationships with Animals. Lantern Books, 2014.

Hatley, J. "Blood intimacies and biodicy: Keeping faith with ticks." Australian Humanities Review 49 (2010): 63-75.

Haupt, L. L. Crow Planet: Essential Wisdom from the Urban Wilderness. Little, Brown and Company, 2009.

Henderson, J.A., & Zarger, R.K. "Toward political ecologies of environmental education." *The Journal of Environmental Education* 48.4) (2017): 285-289.

Hinchliffe, S. & Whatmore, S. "Living cities: towards a politics of conviviality." *Science as Culture* 15.2 (2006): 123-138.

Hobbs, R. J. et al. "Managing the whole landscape: Historical, hybrid, and novel ecosystems." *Frontiers in Ecology and the Environment* 12.10 (2014): 557-564.

Hovorka, A. "Trans-species urban theory: Chickens in an African city." *Cultural Geographies* 15.1) (2008): 95-117.

Hunold, C. and Lloro-Bidart, T. "There goes the neighborhood: Urban coyotes and the politics of wildlife." *Journal of Urban Affairs* (forthcoming).

Hunold, C. "Why not the city? Urban hawk watching and the end of nature." *Nature and Culture* 12.2 (2017): 115-136.

Ives, C.D., Lentini, P.E., Threlfall, C.G., et al. "Cities are hotspots for threatened species." *Global Ecology and Biogeography* 25.1 (2016): 117-126.

Isabella, J. "The intelligent life of the city raccoon: Adapting to the urban jungle has made Rocky smarter." *Nautilus* March 31, 2016. Accessed 29 June 2019. Online.

Karvonen, A. Politics of Urban Runoff: Nature, Technology, and the Sustainable City. The MIT Press, 2011.

Kowarik, I. "Novel urban ecosystems, biodiversity, and conservation." *Environmental Pollution* 159.8/9 (2011): 1974-1983.

Humanimalia: a journal of human/animal interface studies

Leong, M. & Trautwein, M. "A citizen science approach to evaluating US cities for biotic homogenization." *PeerJ* — *Life and Environment* (2019). Accessed 29 June 2019. Online.

Loeb, P. "City councilman wants to explore SW Philly raccoon infestation." *CBS Philly*, January 28, 2017. Accessed 29 June 2019. Online.

Lorimer, J. Wildlife in the Anthropocene: Conservation after Nature. U Minnesota P, 2015).

Lorimer, J. "Non-human charisma." *Environment and Planning D: Society and Space* 25.5 (2007): 911-932.

Luther, E. "Tales of cruelty and belonging: In search of an ethic for urban humanwildlife relations." *Animal Studies Journal* 2.1 (2013): 35-54.

McKiernan, S., & Instone, L. "From pest to partner: Rethinking the Australian White Ibis in the more-than-human city." *Cultural Geographies* 23.3 (2015): 475-494.

Melosi, M.V. *The Sanitary City: Urban Infrastructure in America from Colonial Times to the Present.* Johns Hopkins UP, 2000.

Miéville, China. The City and The City: A Novel. DelRay, 2009.

Nagy, K. & Johnson II, P. D. Eds. *Trash Animals: How we Live with Nature's Filthy, Feral, Invasive, and Unwanted Species.* U Minnesota P, 2013.

The Nature of Cities. "Let go of some urban domestication: How would you convince the mayor to re-wild the city?" (n. d.). Accessed 29 June 2019. Online.

Philadelphia Water Department. *Amended Green City, Clean Waters* (2011). Accessed 29 June 2019. Online.

Poessel, S. A., Breck, S. W., & Gese, E. M. "Spatial ecology of coyotes in the Denver metropolitan area: influence of the urban matrix." *Journal of Mammology* 97.5 (2016): 1414–1427.

Pratt-Bergstrom, B. When Mountain Lions Are Neighbors: People and Wildlife Working It Out in California. Heyday, 2016.

Christian Hunold -- Green Infrastructure and Urban Wildlife: Toward a Politics of Sight

"Raccoon attacks baby and drags her out of bed in Philadelphia, says mom." CBS News December 22, 2017. Accessed 29 June 2019. Online.

Sawiki, E. "New city policy avoids pesticides." *The Malibu Times* June 27, 2019. Accessed 29 June 2019. Online.

Schilthuizen, M. Darwin Comes to Town: How the Urban Jungle Drives Evolution. Picador, 2018.

Schlosberg, D. "Environmental management in the Anthropocene." *The Oxford Handbook of Environmental Political Theory*. T. Gabrielson, C. Hall, J. M. Meyer, & D. Schlosberg, eds. Oxford UP, 2016.

Soulsbury, C. D. & White, P. C. L. "Human–wildlife interactions in urban areas: a review of conflicts, benefits and opportunities." *Wildlife Research* 42.7 (2015): 541-553.

Standish, R. J., Hobbs, R. J., & Miller, J. R. "Improving city life: options for ecological restoration in urban landscapes and how these might influence interactions between people and nature." *Landscape Ecology* 28.6 (2013): 1213-1221.

Stroud, E. Nature Next Door: Cities and Trees in the American Northeast. U Washington P, 2012.

van Dooren, T. "Vultures and their people in India: Equity and entanglement in a time of extinctions." *Wild Hearts: Literature, Ecology, and Inclusion* 22.2 (2010): 130-145.

Van Horn, G. The Way of Coyote: Shared Journeys in the Urban Wild. U Chicago P, 2018.

Wolch, J. "Anima urbis." Progress in Human Geography 26.6 (2002): 721-742.

Yeo, J.-H., & Neo, H. "Monkey business: Human–animal conflicts in urban Singapore." *Social & Cultural Geography* 11.7 (2010): 681-699.

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