THE CAMBRIDGE COMPANION TO AMERICAN LITERATURE AND THE ENVIRONMENT

EDITED BY

SARAH ENSOR

University of Wisconsin, Madison

SUSAN SCOTT PARRISH

University of Michigan, Ann Arbor

CAMBRIDGE
UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom

One Liberty Plaza, 20th Floor, New York, NY 10006, USA

477 Williamstown Road, Port Melbourne, VIC 3207, Australia

314–321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre,
New Delhi – 110025, India

103 Penang Road, #05–06/07, Visioncrest Commercial, Singapore 238467

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning, and research at the highest international levels of excellence.

www.cambridge.org
Information on this title: www.cambridge.org/9781108841900
DOI: 10.1017/9781108895118

First published 2022

A catalogue record for this publication is available from the British Library.

ISBN 978-1-108-84190-0 Hardback
ISBN 978-1-108-81527-7 Paperback

Contents

CHAPTER 11

Urban Narrative and the Futures of Biodiversity

Ursula Heise

The City in the Environmental Imagination

Cities pose a problem for the American environmental imagination. In Europe and North America, the city has conventionally been envisioned as the opposite of nature: either nature identified with an idealized countryside in the European context, as Raymond Williams has shown, or with a no less idealized wilderness in the North American context, which scholars from Henry Nash Smith and Roderick Nash to William Cronon have analyzed.[1] Yet the environments where most humans live now and will in the future are neither wild nor rural, but urban. Studies published by the United Nations, the World Health Organization, and other international organizations over the last decade and a half show that humankind crossed a threshold in 2008, the year in which, for the first time in history, more humans lived in cities than in nonurban areas.[2] Most humans now and in the future will either be born in cities or migrate there over the course of their lives. But even as cities grow materially, demographically, and in terms of their environmental footprint, they have only recently come to be envisioned as part of the environments that environmentalists seek to protect and preserve, and they remain in tension with what most average citizens experience and imagine as "natural."

This does not mean that cities have been ignored by environmentalists. The environmental justice movement has done much to integrate urban areas into environmental discourse and activism since the 1980s. It has highlighted the unequal access of affluent and poor urbanites to green areas, their unequal exposure to unsafe water, polluted air, and contaminated soils, and the disproportionate proximity of poor neighborhoods and neighborhoods of color to hazardous industries and waste dumps. Social and environmental disadvantages, in these contexts, have come to be seen as mapping onto each other in all too predictable ways, as texts from the report on "Toxic Wastes and Race in the United States" by the Church of

https://doi.org/10.1017/9781108895118.012 Published online by Cambridge University Press

Christ Commission for Racial Justice (1987) and Robert Bullard's *Dumping in Dixie* (1990) all the way to the work of Mike Davis, Laura Pulido, and Kyle Powys Whyte have shown. Research that highlights the interconnections between environmental damage and social injustice has often focused on cities, where unequal access to environmental goods and unequal exposure to environmental risks point in particularly stark form to broader inequalities in the ways in which "nature" is used, distributed, and perceived in the United States.

In tandem with the environmental justice movement, but often articulated in a more theoretical idiom, the field of urban political ecology has since the 1990s explored the causes for these inequalities in the United States and elsewhere. Theorists such as Nik Heynen, Maria Kaika, and Erik Swyngedouw have proposed that urban structures as well as ecological configurations are coproduced by the same capitalist mechanisms that "metabolize" natural resources. In this view, city and nature are not opposed, but on the contrary generated by the same underlying economic principles: "There is nothing a priori unnatural about produced environments like cities, genetically modified organisms, dammed rivers, or irrigated fields. Produced environments are specific historical results of socio-environmental processes. The urban world is a cyborg world, part natural/part social, part technical/part cultural, but with no clear boundaries, centres, or margins."[3] As the idea of the "cyborg city" makes clear, urban political ecology refuses to oppose urban systems to natural ones, but approaches both of them as products of capitalist economic structures instead. In this perspective, the processes that produce social inequality and make some groups more vulnerable to environmental crises than others also produce certain kinds of nature, from urban parks to mountaintop removal mines and wilderness areas. The city turns into one combination of social and environmental patterns among others that may appear quite different on the surface but are generated by the same underlying processes. Like the environmental justice movement, urban political ecology therefore seeks to integrate the study of social inequalities with that of natural processes.

Urban natural processes themselves have increasingly become an object of study in the natural sciences as well as in urban planning and design. The German biologist Herbert Sukopp began his research on biodiversity in the politically and geographically isolated area of West Berlin in 1970s, but it is only in the last twenty years that urban ecology has turned into a rapidly growing area of interest in biology and ecology. Cities tend to have different soil characteristics and water systems than nonurban areas.

They are home to distinctive types of fauna and flora, and their own evolutionary processes. And they create their own microclimates (for example, the well-known urban "heat island effect"). In all of these dimensions, cities have become the focus of a vibrant discipline that explores them as environments with a distinctive ecological profile.

The increasingly visible impacts of climate change on cities ranging from Jakarta and Venice to Houston, Miami, New Orleans, and New York have also contributed to a change in the vision of cities' relation to nature. Cities and their growing populations contribute centrally to climate change. In return, rising sea levels, droughts, drinking water shortages, and the greater frequency of severe floods, hurricanes, and wildfires threaten urban areas and challenge the perception that cities occupy a realm outside of nature. However artificial and insulated from natural processes cities may appear, they are still part of global climate systems and vulnerable to natural forces at their most uncontrollable.

One might sum up these various developments across different forms of political activism, academic study, and cultural engagement over the last three decades by saying that if interest focused initially on nature *in* the city – the green areas, bodies of water, and vacant lots that could easily be seen as miniature ecosystems – it moved in the 1990s and early 2000s to nature *for* the city, and the question of how ecosystems services in urban areas could be improved and expanded. At present, the main focus has turned to cities *as* nature – the idea that cities are in fact "novel ecosystems," distinct from nonurban ecosystems but obeying ecological principles of their own.[4]

This shifting perception of cities and nature is also visible in urban writing. The historian Jennifer Price famously invited her readers to consider "Thirteen Ways of Seeing Nature in LA" in 2005. One of the most common perceptions she highlighted was nature as nonexistent: "LA . . . has long been decried as the Anti-Nature – the American city with brown air, fouled beaches, pavement to the horizon, and a concrete river . . .. [T]his is the reigning nature story we tell in LA: there is no nature."[5] Excoriating a "stubborn aversion to cities" as the "central and most indicative failure" of American nature writing, she encourages residents of Los Angeles and other American metropolises instead to consider the many ways in which they encounter nature.[6] Earthquakes, wildfires, wildlife, even commodities such as "mango body whip" might jolt us into an awareness of how natural resources move in and out of the city, and what structures of dependence and exploitation govern our interactions with the nonhuman world.

Urban nature writing is no longer uncommon, and nonfiction prose more broadly has tackled the present and future ecologies of American cities in great detail, from studies of urban birds and parks to portrayals of urban futures in the age of climate change. Urban poetry and fiction have also begun to integrate the ecological with the social lives of the cities they revolve around. In what follows, I'll outline several different types of narrative that have dominated in American urban fiction and nonfiction of the last half-century. On one hand, stories that portray cities as risk environments have focused on toxicity – urban environments as sources of pollution and sites of hazardous industries that put residents' health or lives at risk – or on climate change, a context in which cities are typically portrayed as themselves exposed to lethal risk (section 2). Both of these story templates have been discussed in considerable detail in ecocriticism. On the other hand, some works over the last two decades have described cities as habitats for old and new types of multispecies communities. This more positive view of cities as sites of ecological opportunity rather than just ecological loss is still emergent and has to date attracted less critical attention. For this reason, I will outline the urban multispecies narrative in greater detail in section 3.

Cities as Risk Environments

When Lawrence Buell outlined the genre of environmental writing that he called "toxic discourse" in the late 1990s, he located its modern origins in Rachel Carson's *Silent Spring* (1962) and highlighted four of its narrative components: the protagonist's awakening to the reality of a polluted environment; totalizing images of a world in which there are no sanctuaries from contamination; the moral and political outrage of a socially and politically powerless group against the affluent and empowered class; and the gothic portrayal of bodies and landscapes disfigured by toxicity.[7] The basic elements of this "mythography of betrayed Edens" can be traced back,[8] according to his argument, to nineteenth- and early twentieth-century urban writing: the portrayal of industrial cities in England by Friedrich Engels and Charles Dickens, and of American urban poverty, squalor, and disease in the works of Charles Brockden Brown, Herman Melville, Rebecca Harding Davis, Jack London, and Upton Sinclair.[9] One could add to Buell's anatomy of toxic narrative the emphasis on parent–child relationships and the disruption of families, obvious in nonfiction accounts such as Lois Gibbs's *Love Canal: My Story* (1982) as well as fictionalizations such as Cherríe Moraga's *Heroes and Saints* (1990),

https://doi.org/10.1017/9781108895118.012 Published online by Cambridge University Press

a play about the consequences of exposure to agricultural pesticides for Latinx workers in the Central Valley of California. Religious imagery, which manifests itself prominently in Moraga's rural scenery, also surfaces more subtly in many accounts of urban "sacrifice zones."

Many of the narratives about toxic environments focus on rural areas, from the blighted farmland in the "Fable for Tomorrow" that starts out *Silent Spring* to Moraga's California and the toxic agricultural landscapes in the Midwest Sandra Steingraber portrays in her nonfiction book *Living Downstream* (1997). But urban environments have also figured prominently in pollution narratives, especially after the rise of the environmental justice movement. Lois Gibbs's nonfiction account of a community confronted with buried chemical waste at Love Canal, New York (*Love Canal: My Story*, 1982) served as the pattern for many similar stories of working-class residents' fight for health: for example, Susanne Antonetta's *Body Toxic* (2003), an autobiographical account of the effects of chemical exposure. Don DeLillo's novel *White Noise* (1985) with its account of an "airborne toxic event" in a Midwestern town, published right after the 1984 chemical accident at a Union Carbide plant in Bhopal, India, sets the tone for many other fictional accounts of toxic exposure. Ana Castillo's *So Far from God* (1993), for example, focuses on the lives of five Latina women in the small town of Tome, New Mexico, whose bodies and lives are affected by poverty, unemployment, and toxicity. In Todd Haynes's film *Safe* (1995), Los Angeles reveals itself as an environment saturated with toxins that increasingly impact the health of an affluent white homemaker. Richard Powers's *Gain* (1998), set in a Midwestern town similar to DeLillo's, portrays a woman who dies from cancer caused by an herbicide and the company that manufactures it. All of these texts foreground the victims' experience.

But in the narrative engagements with toxicity, the fight against the polluters is often as prominent as the suffering of the victims, as is already obvious in Gibbs's account of Love Canal. Jonathan Harr's nonfiction book *A Civil Action* (1988) and the 1998 film version describe the struggle to trace the causes of trichloroethylene water contamination in Woburn, Massachusetts, which led to a cancer cluster, and to bring the responsible companies to justice. *Erin Brockovich* (2000), a film directed by Steven Soderbergh and similarly based on real-life events, portrays the struggle of a single mother and legal clerk to bring Pacific Gas and Electric to justice for its contamination of groundwater with hexavalent chromium in the town of Hinckley, California. Neal Stephenson used events such as these for the plot of *Zodiac: An Eco-Thriller* (1988), an action-packed novel that

follows the activist Tyler Sangamon as he seeks to expose a corporation for releasing polychlorinated biphenyls into Boston Harbor.

However innovative their themes and narrative strategies might be – DeLillo's postmodern satire and Antonetta's toxic memoir particularly stand out for their surprising twists on genre patterns and reader expectations – scenarios of urban toxicity tend to remain indebted to a pastoral literary and cultural tradition that has always cast cities as sites of corruption, contamination, and waste, in both literal and metaphorical senses. By describing cities as places where mothers miscarry, children fall sick, and adults die of cancer, or as conglomerates of multiple sources of pollution that threaten the human body, these works perpetuate a vision of urban spaces as incompatible with experiences of nature and healthy living. The city, in other words, remains the antinomy of the kind of nature environmentalists seek to protect.

Narratives of urban pollution have by no means disappeared, as the documentary *The Devil We Know* (2018), about the DuPont Corporation's contamination of Parkersburg, Virginia, shows. But since the early 2000s, climate change has claimed an ever-increasing share of narratives about urban environments and environmentalisms. This increase is not limited to the United States: writers from Australia to Finland and Germany to Brazil have focused on the fate of cities in the age of climate change. The risks that climate change imposes on cities vary widely: extended droughts and shortages of drinking water have turned out to be central challenges for Cape Town, Chennai, and São Paulo; subsidence and rising sea levels for Jakarta; wildfires for Brisbane and Los Angeles; hurricanes and floods for Miami, New Orleans, and New York. But in spite of this variety of changing regional climates and emergent riskscape, it is one image in particular that has dominated the urban literature on climate change: the drowned city.

As in portrayals of urban toxins and pollution, the narrative of the drowning or underwater city as a consequence of climate change reaches across the genres of film, fiction, and nonfiction. The giant tsunami that rolls through Manhattan in Roland Emmerich's *Day After Tomorrow* (2004), the first Hollywood feature film that addressed climate change, is one of the most memorable scenes associated with this climate change imaginary. But it was already a major theme in earlier cli-fi narratives and remained so in later novels, such as Bangkok under water in Paolo Bacigalupi's *The Windup Girl* (2009), and New York flooded in Nathaniel Rich's *Odds Against Tomorrow* (2012) and Kim Stanley Robinson's *New York 2140* (2017).[10] Nonfiction writers have equally seized on the city under water as the central synecdoche

of climate change, as Jeff Goodell's *The Water Will Come: Rising Seas, Sinking Cities, and the Remaking of Civilization* (2017), Ashley Dawson's *Extreme Cities: The Peril and Promise of Urban Life in the Age of Climate Change* (2017), and David Wallace-Wells in *The Uninhabitable Earth* (2019) show. All of these books discuss major metropolises such as New York, Miami, Venice, or Jakarta to portray the risky futures of climate change.

In these epic accounts of drowning cities, a pre-Romantic conception of the relationship between the city and nature often reemerges. It is, once again, natural forces that endanger human settlements (a common vision before the turn of the nineteenth century) rather than cities degrading and polluting nature (a common trope of environmental writing since then). The epic sweep of large-scale destruction in many of these narratives tends to overwrite attention to climate justice – the question of who causes climate change and who suffers the consequences. But climate justice does sometimes inflect fictional as well as nonfictional scenarios of urban disaster. From the stark differences between the residents of corporate compounds and those of urban "pleeblands" in Margaret Atwood's *MaddAddam* trilogy (2003–2013) to Dawson's emphasis on "climate redlining" and the precarity of poor urban dwellers in the face of rising sea levels, many contemporary portrayals of drowning cities foreground that flooding does not mean the same thing for all urbanites. Some city dwellers are more exposed than others, some have better means to escape or counteract the consequences of climate change, and these differences follow well-established patterns of social inequality defined by class and race.

Narratives that emphasize climate justice resemble toxicity narratives in emphasizing the suffering of victims and their resistance to those who cause environmental disaster. At the same time, however, climate change narratives often turn cities themselves into the victims of humans' destruction of nature. As coral reefs bleach and polar bears' habitat thaws, cities drown in rising tides that authors and filmmakers often present as the finale to a particular way of life and sometimes even an apocalyptic end to human society itself. But in both toxicity and climate change narratives, cities are usually portrayed as associated – by way of causes or of consequences – with the destruction of nature at the hand of modern humans.

Multispecies Cities

A different type of urban environmental narrative has begun to emerge over the last quarter-century that seeks to understand cities as sites where

https://doi.org/10.1017/9781108895118.012 Published online by Cambridge University Press

nature is created and perpetuated rather than terminated. Cities are not just habitats by and for humans, in this approach, but also for a multitude of other species. In geography and urban planning, theorists such as Jennifer Wolch have therefore argued that cities should be reenvisioned from the perspective of "zoöpolis" that considers how urban structures affect nonhumans as well as humans.[11] Such a perspective invites a broadening of environmental justice and a radical urban democracy that include nonhuman species.[12] In anthropology, multispecies ethnographers have made a sustained effort to reenvision what we usually conceive of as human societies and cultures as multispecies assemblages that involve humans along with the fauna and flora that keep them alive, the animals and plants that form part of culture and religion, and the bacteria and viruses that variously ensure or harm humans' organic functions. Such multispecies ethnography has in some cases focused on urban spaces and species, as Deborah Bird Rose and Thom van Dooren's do in their study of penguins and flying foxes in Sydney.[13]

Such approaches to cities as multispecies communities have translated into several recurring narrative templates that emerge in fiction as well as nonfiction narratives. One of the most common of these is the awareness narrative, in which an individual or a group, gradually or suddenly, discovers the presence and sometimes agency of nonhumans in the city. Encouraging such discoveries is the goal of many "citizen science" or "community science" projects that involve urban dwellers without any formal scientific training in the search for and documentation of a wide variety of species, from insects and reptiles to birds and coyotes. The Natural History Museums of Los Angeles and San Diego, for example, co-organized "Reptiles and Amphibians of Southern California" (RASCals), a community science effort to document the adaptations of species in these two taxa to urbanization and habitat change.[14] Popular-scientific accounts of urban biodiversity often follow a similar impulse: John Marzluff's *Subirdia*, for example, seeks to create awareness of just how many species of trees and birds populate cities, and what principles govern which species thrive and which ones vanish from urban areas.

This awakening to the liveliness of urban environments resonates with the more general narrative of awareness that Scott Slovic has highlighted as characteristic of American nature writing.[15] It has also made its way into fiction: Buzzworm, an African American neighborhood councilor in Karen Tei Yamashita's novel *Tropic of Orange* (1997), for example, cares deeply about the omnipresent palm trees that dot the urban landscape of Los Angeles. Along with the material and existential support he lends to the

city's poorer inhabitants, he teaches them to distinguish and take care of the seven different species of palms that sometimes thrive, but more often languish in the urban surroundings. T, the protagonist of Lydia Millet's novel *How the Dead Dream* (2008), begins to consider nonhumans after accidentally hitting a coyote on a desert road, and he gradually develops an awareness of the animal populations displaced by the real estate ventures he undertakes around Los Angeles. So intense becomes his interest in displacement and extinction that he ends up breaking into zoos to spend nights in the enclosures of "final animals," cut off from their conspecifics and sometimes the last of their kind.[16] Social isolation, grief, and alienation are no longer distinctively human experiences in this scenario, but shared across species in an urban space in which old social and ecological connections are replaced by new ones.

The multispecies awareness narrative sometimes combines with the narrative of urban return, which highlights how species that have vanished from cities return. This narrative forms one plot strand in Kim Stanley's Robinson's *New York 2140* (2017), which portrays a city that by the middle of the twenty-second century has experienced a fifty-foot sea level rise. In this scenario, lower Manhattan is completely flooded and has turned into an "aquatropolis" or "SuperVenice."[17] The drowned city that usually signals a civilizational ending in climate change narratives instead catalyzes New York's return to at least some of its original ecological profile. A character named only "the citizen" points out that New York is

> such a city that it used to take some looking to see it as an estuary. Since the floods that's become easier, because although it was a drowned coastline before, it is now more drowneder than ever. Fifty-feet-higher sea level means a much bigger bay, more tidally confused, Hell Gate more hellish, the Harlem River a wild tidal race and not a shipping canal, the Meadowlands a shallow sea, Brooklyn and Queens and the south Bronx all shallow seas.[18]

This unintended ecological restoration includes biodiversity: "And so the animals have come back, the fish, the fowl, the oysters, quite a few of them two-headed and fatal to ingest, but back," the citizen remarks drily.[19] At another point in the narrative, the same character outlines the biological resurgence in more detail and without such sarcasm:

> On the floors of the canals, the old sewer holes spew life from below. Up and down life floats, in and out with the tides. Salamanders and frogs and turtles proliferate among the fishes and eels, burrow in the mulm. Above them birds flock and nest in the concrete cliffs of the city . . . Right whales swim

> into the upper bay to birth their babies. Minke whales, finbacks, humpbacks. Wolves and foxes skulk in the forests of the outer boroughs. . .. At the center of the estuarine network swims the mayor of the municipality, the beaver, busily building wetlands. Beavers are the real real estate developers. River otters, mink, fishers, weasels, raccoons: all these citizens inhabit the world the beavers made from their version of lumber. Around them swim harbor seals, harbor porpoises. A sperm whale sails through the Narrows like an ocean liner. Squirrels and bats. The American black bear. They have all come back like the tide, like poetry.[20]

For all its continuing social and ecological problems, New York City has been transformed back into a vibrant multispecies ecosystem by way of climate change and rising seas.

In a different twist on the narrative of urban return, futuristic cities are not always repopulated by native species only. Often they include non-native plants and animals that combine with native ones into the "novel ecosystems" mentioned earlier. Terry Gilliam's science fiction noir *12 Monkeys* (1995), a time-travel narrative, features moments that evoke such a new urban ecology. James Cole (played by Bruce Willis), a prisoner in the year 2035, is sent back in time to prevent the outbreak of a deadly pandemic that races around the globe in 1996 and exterminates most of humankind. An underground group called the Army of the Twelve Monkeys is suspected of having released the virus, but Cole discovers that these dissidents are far more interested in animal rights than genocide. In 1996, they release a large number of animals from the Philadelphia Zoo in an act of protest, placing the group leader's father, a renowned geneticist, in a cage instead. In "something like a fantasy of utopian possibilities in the present,"[21] in an otherwise largely bleak vision of the future, Cole sees these animals racing about and enjoying their freedom in the streets of Philadelphia. Indeed, some of these urban-adapted escapees still populate the film's ruined Philadelphia forty years later.

Gene technology inflects the biodiversity of the future in some narratives to such a degree that the city is no longer just a site of return but also of evolution. The Dutch ecologist Menno Schilthuizen has argued that cities are already places of natural evolution, as demonstrated by a mosquito species whose sole habitat is the London Underground: "What if [*Culex molestus*] is not an exception anymore? . . . What if our grip on the earth's ecosystems has become so firm that life on earth is in the process of evolving ways to adapt to a thoroughly urban planet?" Schilthuizen asks.[22] He argues that

> [w]hile we all have been focusing on the vanishing quantity of unspoiled nature, urban ecosystems have been evolving behind our backs, right in the cities that we have been turning up our naturalist noses at. While we have been trying to save the world's crumbling pre-urban ecosystem, we have been ignoring the fact that nature has already been putting up the scaffolds to build novel, urban ecosystems for the future.[23]

Fictional texts do not typically focus on natural evolution in cities but instead tend to tell stories of technologically driven evolution. Genetic modification, including the mixing of genes from different organisms in a single species, is a common motif in contemporary science fiction, from Atwood's Crakers and pigoons in *Oryx and Crake* (2003) to the part-human, part-avian protagonist of Jeff VanderMeer's *Strange Bird* (2017). One of the best-known examples of this third type of urban multispecies narrative is Paolo Bacigalupi's *The Windup Girl* (2009). In this novel's storyworld, crops are regularly decimated by pests and plagues that trigger famine and disease in a global context of climate change and biodiversity loss. Agricultural and chemical corporations desperately reengineer the crops to make them plague-resilient, though these solutions only yield one or two viable crop cycles before the pests adapt. Bangkok, where the novel is set, swarms with gene-engineered plants and animals as well as new types of fungi, bacteria, and viruses. At the beginning of the novel, Anderson Lake, the representative of an American company, has to shoot a megodont – a genetically engineered descendant of mammoths – that is running amok in a factory. He also discovers a "ngaw" at a stand on a street market, a disease-free version of the rambutan fruit that he infers could only have been recreated from original genes that the Thai government keeps hidden away in a seed vault.[24] Through this genetic revival of a lost species, the narrative of biodiversity return here becomes historical rather than geographical, at the same time that the megodont stands in for the numerous newly created species in the metropolis of the future – including genetically engineered humans.

A fourth type of multispecies narrative that sometimes, but not always, involves technology focuses on innovative human–animal bonds. The social contract between humans, Crakers, and genetically engineered pigoons at the end of Atwood's *MaddAddam* (2013) is one example of a community that reaches across species. Sam J. Miller's *Blackfish City* (2018) gives this narrative template a more explicitly urban turn, as the story is set in an island city in the Arctic Ocean, Qaanaaq, which has become a magnet for climate refugees. One day, a mysterious woman named Masaaraaq arrives riding an orca, to whom, as it turns out, she is

bonded by nanotechnology; the polar bear who accompanies her is later bonded with another character, Kaev, in a connection that is both physical and psychological. These new individual and communal relations to animals are not completely accounted for by the conventional figures of the animal familiar, the pet, or the genetic relative. Rather, they signal the emergence of innovative human–animal bonds in urban contexts where social relationships between humans have been vitiated by ecological disaster, corporate exploitation, poverty, and crime.

It is no accident, of course, that one of the animal characters in *Blackfish City* is a polar bear, an animal species that is itself endangered by climate change. Nonhuman species, especially endangered ones such as polar bears, tigers, or bees affected by colony collapse disorder play a subordinate but persistent role in the awareness and conversations of the major characters in novels such as Jonathan Lethem's *Chronic City* (2009) or Teju Cole's *Open City* (2011). They highlight how much a sense of environmental crisis filters even into urban narratives that portray the city as largely detached from nature, but its residents as haunted by the knowledge that the natural world outside the city and quite possibly inside it is both under threat and might put the very fabric of urban life at risk.

One of the recent American texts that most successfully combines this sense of precarity with a celebration of multispecies communities does so through the medium of lyrical poetry: Harryette Mullen's *Urban Tumbleweed: Notes from a Tanka Diary* (2013). Mullen, who is neither an environmentalist, a birdwatcher, nor a gardener, acknowledges that she found herself without a ready-made language for the numerous encounters with urban vegetation and wildlife she experienced in her daily life as a pedestrian in Los Angeles: "Like ice plant, eucalyptus, and nearly all of LA's iconic palm trees, I too am a transplant to this metropolis of motor vehicles . . . Walking instead of driving allows a different kind of attention to surroundings . . . Los Angeles, however urban, offers everyday encounters with nature."[25] Echoing Price's call for awareness of large cities as forms of nature, Mullen explores such encounters as part of an urban landscape also characterized by migration, homelessness, and incidents of racial discrimination.

In *Urban Tumbleweed* (Mullen's metaphor for plastic bags blowing down urban streets), encounters with plants, animals, and weather events are as often marked by misrecognition or misunderstanding as by the deep familiarity and expert knowledge that American nature writing tends to celebrate.[26] "What of a poet who does not know the proper names of native and non-native fauna and flora, who sees 'a yellow flower by a creek' – not

a *Mimulus*?" Mullen asks.[27] And yet, urban nature flourishes even in the absence of such knowledge and care, as thriving gardens and passing birds reveal:

> Why should I care about my neighbor's
> riotous dandelions? Does he concern himself
> with my slovenly jacaranda?[28]

> Caught a quick glimpse of bright eyes,
> yellow feathers, dark wings. Never learned your name –
> and to you, bird, I also remain anonymous.[29]

These brief encounters and loose connections between humans and non-humans, natives and non-natives lead to new urban ecologies and communities, even if they are ecologies of migration, displacement, and uprootedness. In one poem, native monarch butterflies are seen winter-roosting on introduced eucalyptus trees:

> Shady eucalyptus grove where sleeping
> butterflies cover each limb of every tree –
> A rest stop on their migratory flight.[30]

Human trash becomes a source of food for wildlife:

> Two seagulls face off in the parking lot
> between Costco and In-N-Out,
> quarreling over a half-eaten hamburger bun.[31]

Another poem (one among many) shows wildlife using urban infrastructures:

> Baby ducklings trailing mother duck
> can scarcely wet their feet in shallow puddles
> of this city's concrete rivers and creeks.[32]

And conversely, even non-native species provide human urbanites with an experience of nature:

> A scenic backdrop of young bamboo stalks
> growing in a corner of the yard, inspiring
> the children's tropical adventures.[33]

All these are glimpses of a socio-ecological cityscape where transplants, migrants, and homeless people are often as much "introduced" as urban plants or animals, and where all of them sometimes clash with attempts to create or recreate a social order or ecosystem that authorities perceive to have been disturbed. And yet, urban multispecies communities persist and

often thrive – caught in lyrical fragments that sketch rather than spell out a full-fledged narrative of the futures of urban biodiversity.

Such narratives still remain rarer than the more familiar visions of toxic and drowned cities I discussed earlier, but as *Urban Tumbleweed* demonstrates, they are no longer uncommon even among writers whose primary orientation is not environmentalist. Nature in these narratives no longer resides outside the city, but is seen to inhabit urban spaces. Stories about pollution and climate change, as I outlined earlier, show how the entanglement of nature with urban areas produces risks for different groups of urbanites and for cities as a whole. Stories about biological evolution and the emergence of multispecies networks foreground a different kind of urban future in which the city itself is reimagined as a form of nature and reshaped into a habitat that makes room for different kinds of humans and of nonhumans. It is through such stories of multispecies communities that emerge – even from scenarios of inequality and risk – that American environmental literature demonstrates its relevance for an increasingly urban future.