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Consider the Squirrel: Freaks, Vermin, and Value in the Ruin(s) of Nature

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You know, they say three species disappear off the planet every day. You wonder how many new ones are being created.

—Fox Mulder, “The Host,” X-Files Season Two

Pautovsky the nature-lover notices no flamingos, no shrimp, no crabs, no marine mammals. Even though, as almost every guidebook mentions, the Caspian ringed seal is frequently seen frolicking in the harbour at Krasnovodsk . . . And suddenly I think I understand what is driving Pautovsky: he had to describe the eastern shoreline of the Caspian as a Martian landscape, the bay at Kara Bogaz as a deadly morass. How else could he present the industrialisation of this virgin territory as a blessing? Pautovsky, who viewed “a living bond with nature” as a prerequisite for the writer’s calling, had mentally transformed the bay at Kara Bogaz into the ultimate expanse of “non-nature.”

—Frank Westerman, Engineers of the Soul: In the Footsteps of Stalin’s Writers
Environmental and ecological movements, as varied and inconsistent in their ideologies and politics, goals and methods, as they might be, share at least one crucial idea in common: human society should do its best not to (further) damage nature too much. Although they might disagree regarding what it means to “do one’s best” or “damage too much,” regardless of their professed radicalness or the perceived depth (or shallowness) of their ecology, all organizations or persons who claim the designation “ecological, seek to limit,” if not prevent entirely, the damage inflicted by humanity on what, for convenience’s sake, will here be referred to as “nature.” This situation gives rise to a contradiction, however, particularly with respect to the purported progressive politics of left-leaning green movements. Although such movements have the capacity to envision an improvement in society, which in this context connotes a more eco-friendly way of living, I argue that they fail to imagine any possible positive development in their central object of concern: the natural world.

The dominant environmental discourse does not allow for the possibility of progressive changes in the nature that it is attempting to save. Instead, in the language of groups such as Greenpeace, almost any changes in natural systems, relations, and populations, unless perceived to harken back to an earlier state, are almost inevitably interpreted as damage. While newer currents in ecological science have moved away from equilibrium models of balance and stability in nature, the assumptions of earlier understandings of a static nature continue to structure much popular, political, and even scientific environmental discussion. As a consequence, environmentalism can be understood as always potentially and problematically
conservative with respect to nature in ways that, I suggest, echo social prejudice regarding problematic and “undesirable” citizens of the modern state. Drawing on the subfield of “new ecology,” I thus suggest the contours of an alternate, progressive understanding of the environment that does not seek simply to valorize, venerate, and protect nature’s status quo: Because why, for those who wish to revolutionize society (often in the service of nature), can nature never be revolutionized? This particular provocation will be investigated via the figure of the squirrel, who I suggest functions as a ‘natural revolutionary,’ whose disruption of discourses of nature is defused through the mobilization of terms such as “vermin,” but who, if considered as a worthwhile inhabitant of a legitimate environment, can point the way toward a progressive, rather than conservative, conception of that realm often referred to as nature.

However, before I offer any further argumentation, I believe it is pertinent first to offer a brief biographical note to explain how my particular fascination and valorization of the squirrel arose, and which provides the context for the genesis of the current discussion. Given the widespread global distribution of the squirrel, who exists as a domestic (not to be confused with domesticated) creature across Eurasia, Africa, and throughout the Americas, my upbringing in New Zealand—one of the few landmasses on earth devoid not only of squirrels but of any native rodent population whatsoever—could be considered woefully squirrel-free. Consequently, my move to North America for my graduate studies exposed me to a level of squirrel activity that far exceeded any of my previous experiences, and I became fascinated with their manic presence, both at home and on campus, in my everyday life. I have lost countless productive moments transfixed by their ridiculous suburban acrobatics and never-ceasing activity. I quickly discovered, however, that the majority of my fellow graduate students felt no such affection for
the “rats-with-tails,” if they were aware of them at all. In their eyes, squirrels were not free-range pets but, rather, verminous pests.

Although Boria Sax describes the squirrel as “the most beloved rodent in the Northern Hemisphere” (2001, 33), in my experience squirrels are most frequently ignored when they are not being persecuted, with the possible exception of children. Very few locals will stop to observe a squirrel, even when otherwise unoccupied, such as when waiting for a bus. Such a perspective prevents my peers from seeing the squirrels as the odd little wild animals that I perceive: their squirrels are not a comingling of the natural and urban; they are simply debased creatures eking out a compromised life among urban waste. It is the possibility of this split perspective that informs my argument, my attempt to account for the lowly position of the squirrel as socially constructed and to understand the ideological ends that its disparagement might serve. I am therefore arguing directly against Sax’s optimistic assertion that “[squirrels] reassure us that perhaps we have not alienated ourselves too much from the natural world” (2001, 33), not because I believe that squirrels cannot play such a profound role, but because Sax dramatically overestimates the existing goodwill toward squirrels and other urban creatures. The emphasis here is on the perhaps, for while I agree that squirrels could play this reassuring role, they overwhelmingly do not, for what I will suggest are deep-seated ideological reasons. However, before we consider the potential political function of the squirrel in any more depth, it is first necessary to consider the wider ecological context in which the squirrel is located; in particular, the implicit sense that there exist “proper” forms and arrangements of nature.

<1> Conservation and the Ruin(s) of Nature
Within progressive green movements and politics there exists an inclination to interpret change to the natural environment as damage: to see transformation as pollution or degradation. My goal here is not to offer a complete overview of the complex debates and discussions by, within, and about current ecological and environmental discussion and practices relating to conservation, but instead to offer only a brief overview of a subsection of public and politic perspectives on nature and environmental imperatives relevant to the current discussion. Although contemporary currents in scientific ecology may have long since abandoned models of static and distinct nature, the continued dominance of such ways of thinking can be seen in the persistent prevalence of conservationist and biodiversity discourses. This is especially true within nonspecialized public discussion—for example, in volumes such as Alan Burdick’s National Book Award Finalist, *Out of Eden*, and William M. Adam’s work, including *Against Extinction* and his recently reissued *Future Nature*, to name only a few—which continues to promulgate the view that human intervention in nature constitutes damage, degradation, and deterioration. As Nigel Clark argues, “Environmentalists—and the social scientists who have heeded their message—have often presented the impact of human activity upon the natural world in terms of an overwhelming and unilateral degradation” (2003, 165), a default interpretation that speaks to what Joanne Gottlieb refers to as “an anxiety about human intervention in received nature” (238). This profound pessimism has not arisen in a vacuum, but rather can be understood as a response to a depressingly familiar litany of dramatic changes in the global environment over the past century: ozone depletion, soil contamination, water pollution, species extinction, overfishing, deforestation, climate change. These processes and events are understood as movements from a superior state, alternately conceptualized as pristine, stable, healthy, biologically integral, or, simply better, to a degraded state of nature. Thus, a complete ozone
layer, clean soil and water, a desirable set of animal and plant species, and a stable climate give way to lesser, incomplete, and contaminated versions. One version of nature—that which is closer to the original, untouched state—is deemed more desirable, more preferable, in short, of more value, than its compromised, damaged contemporary counterpart.

Although some environmentalists might scoff at what is clearly a somewhat reductive characterization, such a reaction belies the widespread implication of this position in a range of ecological and environmental texts, particularly those aligned with a progressive politics. Environmental discussion and debate abound with words such as “conserve,” “protect,” and “restore” that speak to what Neil Smith has called, “the conservative assumptions of saviour environmentalism” (280). The consequence of such language is both to reinstate and moralize a nature-human distinction. Conservation discourse, in particular, acts to implicitly delimit and police the boundaries of human and nature, in order to legitimate its own practice, which is premised upon the preexistence of nature prior to the intrusion of the human: “Nature in other words is pre-constituted and conservation comes after nature” (Hinchliffe and Whatmore, 88). Indeed, as has been charted extensively by geographers and anthropologists, such as William Cronon, Sarah Whatmore, Anna Tsing, and David Hinchliffe, contemporary environmentalism has often relied, and continues to rely, on the sustained distinction of human and natural realms (cf. Cronon 1995; Hinchiffe 2007; 2008; Hinchliffe and Whatmore 2006; Hinchliffe et al. 2005; Tsing 2005; Whatmore 2002) to such an extent that “in various ways [the] treatment of the wild as a pristine exterior, the touchstone of an original nature, sets the parameters of contemporary environmental politics” (Whatmore, 9). Thus, despite increasing acknowledgment of the “general de-naturalization that now encompasses the biophysical world in its entirety” (Clark 2002, 103)—that is to say, the reach of human inference and involvement into every nook and
cranney previously thought to shelter an undisturbed nature—to threaten the sanctity of those human-animal boundaries is to invite the ire of environmental and conservational groups whose moral and political authority requires the continued existence of those boundaries. From the Wilderness Society and the Sierra Club to more ostensibly radical groups, such as EarthFirst!, a sense of wild nature constitutes a moral and political imperative (Whatmore, 10–13), one that reaches far beyond the membership of organized environmental movements, to find resonance with more general “moral claims about a supposedly asocial ‘nature’ [that] remain as widespread as they are potent” (Castree, 237). Thus, in spite of an apparent awareness of the ever-present influence of the human upon the natural, human interaction with nature is still implicitly and widely characterized as a damaging intrusion upon an otherwise inviolate space.  

Moreover, not only does this conservation discourse reinforce human-nature distinctions, but it also functions to render this separate nature outside history. The prime method through which this ahistoricization is achieved in the current moment is through the environmental claims associated with the widespread discourses of biodiversity. Although the term’s extensive implication in scientific and political documents, such as the International Convention on Biodiversity, might suggest that “biodiversity” refers to a clearly defined and potentially quantifiable entity, clear definitions of biodiversity are not forthcoming in practice. This confused status of the word is evident when a series of leading ecologists can provide vague, multiple, and equivocal definitions of the term (Takacs, 46–49). Thus, rather than offering a measurable quality of the natural world, biodiversity is instead better thought of as a tool for accomplishing a particular end: “A zealous defence of a particular social construction of nature that recognizes, analyzes and rues this furious destruction of life on Earth” (1–2). Notably, David Takacs, who offers this definition, is not criticizing biodiversity on these grounds; instead, he is
celebrating biodiversity discourse’s ability to achieve conservation goals while not trafficking in critically compromised notions such as nature and wilderness. He therefore applauds the extent to which “the term biodiversity incorporates the conservation goals toward which many biologists really aim—preservation of intact ecosystems and biotic processes—while still allowing the public to maintain an emotional grasp on charismatic icons. It puts a scientific spin on nature, while avoiding the word’s negative connotations” (79).

Such an approach almost seems intentionally to mystify the discussion in order to achieve its ends. It should be of little surprise, then, that the term “biodiversity” carries within it a series of problematic implications, the most pertinent of which to the current argument is its ahistoricizing tendency. For while biodiversity might imply a desire to maximize difference in the natural world, in practice it tends to focus on the preservation of difference as it currently exists. For example, as Geoffrey Bowker argues, “Paradoxically, preventing global warming is extremely harmful for biodiversity—when there were temperate forests up in the Arctic, the biodiversity potential of the world was higher than it is now” (112). However, such a conundrum arises only when we take biodiversity at face value, as a mission to maximize the potential genetic or taxonomic diversity of nonhuman life, rather than in terms of its underlying, conservationist impulse, which Bowker diagnoses as a the goal to “preserv[e] that which is—a current set of species, our current climate conditions, and so forth” (ibid.). In this account of biodiversity, Bowker is tellingly not at odds with Takacs; both see in biodiversity an attempt to reinstate preservation goals without turning to notions of nature and wilderness dismissed as problematic. Thus, while Takacs would probably not phrase his analysis so critically, it is unlikely that he would object in spirit to Bowker’s assertion that “much biodiversity . . . discourse is concerned with rendering the present eternal—moving ourselves and our planet out
of the flow of history” (ibid.). Hence, despite its aura of apparent scientific clarity and neutrality, biodiversity functions as a normative concept that reinforces the apparent correctness and desirability of a vision of nature frozen in an eternal present. The widespread and acritical circulation of the word “biodiversity” in contemporary evolutionary and ecological discourse speaks to the extent to which belief in a desirable stasis of nature continues to inform such practices.

For example, such a perspective can be seen at work in the websites of international environmental organizations such as Greenpeace and the World Wildlife Fund for Nature (WWF), which function as central, though not always uncontroversial, representatives of Western environmentalism. Alongside many other similar organizations, both Greenpeace and the World Wildlife Fund take up the discourses of conservation, ecology, and biodiversity (Emel and Wolch, 11–12). The stated goals of Greenpeace overwhelmingly refer to the protection or preservation of nature as it currently exists (or previously existed), whether it is in relation to forests, oceans, agriculture, or “toxic chemicals.” In all these instances, the explicit goal is to maintain the current state of nature by minimizing or avoiding outright any transformations to those environments caused by human interaction (Greenpeace.org). Similarly, the World Wildlife Fund for Nature states that its focus is to “work around the magnificent diversity of life on this planet, the extraordinary places they live in, and while trying to reduce humanity’s impact on this life and these places” (wwf.panda.org). Here the protection of nature is explicitly framed in terms of minimizing human interaction and ensuring that the natural world undergoes as little change as possible: as Hinchliffe notes of conservation environmentalism, “stasis is favoured over process” (2007, 126). Both Greenpeace and the World Wildlife Fund can thus be considered representative of a much wider environmentalist assumption that human contact almost
invariably damages nature: human interaction with the ecosystem, unless actively fostering the
restoration thereof, can only propel it toward its ruin.

From this conservationist perspective, still resonant with wider public positions toward
nature and the environment, there is no way in which to imagine a different state of nature that
could be comparable, and certainly not better, than the status quo. Consequently, the task of
maintaining the health of the environment comes to be regarded as identical to preserving its
current, or restoring its former, alignment, a desire concomitant with Bowker’s eternal present of
biodiversity. Such an assumption manifests in the phrase “back-to-nature,” the inverse of which,
“forward-to-nature,” is so alien to our current understanding as to be nonsensical. Moreover,
there is a clear sense of priority and value within these discourses; an older and untouched nature
is superior and more desirable than a newer and hence touched, and hence compromised iteration
of the same, if that transformed version can still even be thought of as “nature.” Indeed, even
though such a position is at odds with much of the current thinking in ecological science, a
relevant avenue of thought to which I will return, notions of environmental damage rooted in
conservationist accounts of a distinct and timeless sphere of nature continue to hold much sway
in public discussions of ostensibly nonhuman spaces, and in the lives of the nonhumans who
inhabit those spaces.

<1> Freaks of Nature: Addict Octopi and Intersex Fish

An indirect corollary of these circumstances is that just as human-determined transformation of
an environment is understood as degradation, any transformation in a natural animal or species
can also be interpreted as damage, even in the absence of any discernible signs of impaired
environmental suitability and functioning. A case in point can be located in Félix Guattari’s The
Three Ecologies, wherein the author recounts an experiment conducted by the French biologist and physician Alain Bombard on a television show. “He produced two glass tanks, one filled with polluted water—of the sort that one might draw from the port of Marseille—containing a healthy, thriving, almost-dancing octopus. The other tank contained pure, unpolluted seawater. Bombard caught the octopus and immersed it in the ‘normal’ water; after a few seconds the animal curled up, sank to the bottom and died” (42–43).

The conservationist tendency lacks an ethical or political framework in which to make sense of this narrative: that a natural creature should thrive in a damaged ecosystem and suffer in a “natural” or, as Guatarri skeptically has it, “normal” one. Therefore, it must reinterpret the situation in terms of harm. To this end, in her assessment of Deleuze’s experiment by proxy, Kate Soper argues:

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Should we conclude from this demonstration that all is well with the Mediterranean, or even with the quality of octopus life therein? No, indeed. For not all species are likely to prove so accommodating, least of all those—like human bathers—who do not live in its waters but rely on them for less essential purposes. And as for the octopus, who can say what kind of life this is for it, but one might speculate that it was nearer to that of the drug addict or the alcoholic than to that of the healthy individual. (89)

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Thus, in order to be recontained in the conservationist discourse, the octopus itself must be reconstructed as a damaged specimen, in a move that brings to mind the paternalistic and moralistic projects of an earlier era, not to mention speaks ill of the dead (octopus). By refusing
to adhere to the standards of nature presumed by a preservationist discourse, and suggesting the possibility that continued existence, rather than decline, could characterize alternate arrangements of the ecosystem, Guattari’s octopus thereby voids its claim to be a worthwhile functional member of the ecosystem community and is recharacterized as a miscreant or deviant. While extreme, Soper’s reaction can nonetheless be considered symptomatic of the tendency to deny the possibility that “natural creatures” could survive in an environment typically understood to be less than natural. Such a situation is problematic for a preservationist or conservationist impulse because, in a manner similar to the introduction of invasive organisms, it demonstrates a capacity within ecosystems to adapt to changes: to recalibrate in new forms when conditions change and for “living things to improvise in new settings, to compose themselves into new rhythms and patterns and to recompose the milieus in which they dwell” (Clark 2003, 165). Animals that demonstrate a capacity to thrive, or at least exist, within altered ecosystems bring the conservationist impulse into question and, as such, must themselves be discursively marginalized.

This eco-cultural stigma should by no means be thought to be restricted to Guatarri’s poor set-upon octopus. The conservationist impulse informs a wide range of green projects and understandings of the world, such as the alarm surrounding the intersex fish of the Potomac River. Concern regarding the intersex fish of the Potomac, a river that flows into Chesapeake Bay in the mid-Atlantic region of the United States, originated from a study carried out in 2005 to determine the source of a localized die-off in the smallmouth bass population. In the course of the study, the scientists discovered a higher-than-expected proportion of testicular oocytes within the smallmouth bass (Hinck et al., 553, 564–65), a condition that leads to the production of eggs in the testes and reduced sperm count. These findings were noted in subsequent studies, where it
was suggested that the testicular oocytes may have arisen as a result of exposure to a variety of chemicals that had entered the waterway from various agricultural, industrial, and domestic sources (cf. Iwanowicz et al.; Blazer, Iwanowicz, and Iwanowicz). To be clear, this is not an evolutionary response: it is a physiological shift on the individual level. Iwanowicz et al. present the occurrence of testicular oocytes as an indication of a biological shift in the fish in response to changes in the chemical makeup of the river (1072–73), whereas Blazer et al. directly frame this shift as an abnormality, caused by a deviation from “pristine” conditions (242, 248). This interpretation is taken further in the popular press of the surrounding area, where the intersexuality of the fish is explicitly cast as pollution in and of itself. A few brief examples will illustrate this point. In a Washington Post article, Vicki Blazer, the first author on one of the above-cited papers, is quoted as saying that the fish in the Potomac “are definitely messed up” (Fahrenthold). In a blog associated with the Baltimore Sun, Hedrick Belin, the president of the Potomac Conservancy, declares that “this intersex fish thing is a clear signal that something is wrong” (Wheeler). Perhaps the most aggressive perspective can be found in the work of New York Times reporter and columnist Nicholas Kristof, who equates the intersexuality of the fish with deformation, which he then links directly to the “deformation” of young intersex boys (2009b). On his affiliated blog, Kristof suggests that the intersexuality of the Potomac fish is “one of the scarier things going on [in terms of chemical-organism interaction]” (2009a).

As with Guatarri’s octopus, the biology of the smallmouth bass has responded to their environmental conditions and, as with the octopus, this shift is interpreted as damage from a preservationist perspective: the intersex fish are cast as literal examples of the proverbial “freak of nature.” When attempting to make sense of this adaptation, rather than declaring that the persistence of the ecosystem suggests that earlier claims to absolute damage may have been
overstated, the altered animals are instead seen to have degraded along with their environment. What makes this example particularly troubling and resonant is that the preservationist response to the basses’ phenotypical change so closely replicates an intolerant response to human intersexuality, one that is often associated with a reactionary and exclusionary politics. The designation of the intersex fish of the Potomac as ecological freaks replicates the intolerant portrayal of human intersexuality as “freakish” or “unnatural” and, in doing so, speaks to the common recourse of conservatism and conservationism to the notion of a correct or normal state. This demonization of the intersex fish, as an unacceptable deviation from the correct state of nature, makes explicit the connection between a purportedly progressive environmental belief and an unarguably conservative declaration of the correct or normal state of human affairs and sexuality.

What both addict octopus and intersex fish sites have in common, despite their obvious differences in form and rhetoric, is the fundamental assumption that the certain arrangements of nature designated as “normal” and “healthy,” most frequently those currently extant, are preferable to other possible organizations or iterations of natural forces and creatures (except for those that existed prior to the current form). These altered environments will be interpreted as damaged. Consequently, animals that flourish in these degraded spaces are themselves regarded as degraded or damaged animals: their ability to live and thrive taken as proof of sickness rather than health. Niels Einarsson has argued that though all animals are allegedly equal in environmental terms, in practices whales are more equal (72); inversely, addict octopi and intersex fish are examples of animals that turn out to be less equal than other animals. Moreover, the rhetoric in which these animals are denounced bears uncomfortable parallels with the illiberal language of social repression and exclusion within human societies. As the human addicted to
drugs is criminalized and persecuted and the intersexual human is subject to medicalization and “corrective” surgery, so apparently are those terms mobilized to mark off those nonhumans who are thought to contravene acceptable conditions and limits of animal existence. Worryingly, this is done under the auspices of apparently progressive environmental thought, yet how can environmentalism be considered progressive insofar as its acts to reinscribe hierarchies of discrimination, increasingly recognized as unjust in terms of human society? Why should an addict octopus have less claim to life than other animals, or an intersex fish be deemed an inherent and obvious index of degradation? And to what extent could the persistence of such rhetoric in terms of nonhumans contribute to the perpetuation of structures of human discrimination? The demonization of Guatarri’s octopus or the intersex fish of the Potomac as animals that fail to adhere to desired community standards speaks to a problematic political logic at the heart of environmental discourse and indicates that the progressive shift that the current ecology calls for in society is premised upon a conservative notion of nature. How, then, would it be possible to speak of environmentalism in a more progressive manner? Taking up this question, I draw on the relatively recent subdiscipline of “new ecology” in order to consider the possibility of an alternative environmental awareness where such resilience and transformation speaks to the possibility of alternative and new ecosystems, rather than the degradation of nature.

<1> New Ecology and the Preservation of Degradation

To a large extent, the diffuse and deeply infused notions of nature so far discussed in terms of environmentalist politics and ecological concern can be considered a hangover of older forms of scientific ecological theories, whose continued influence on popular environmental thinking can be understood as a consequence of sustained attempts by ecologists of earlier periods to engage
with the general public (Worster, 1–7). Premised upon a belief in preexisting ecological
harmony, such forms of ecological science dominated the discipline from the 1950s to the 1970s,
when many contemporary environmental groups were coming into being and “tended to treat
humans either as well-adapted parts of wider ecosystems or else disruptive forces that failed to
respect the integrity of those ecosystems” (Castree, 234–35). In contrast, beginning in the 1990s,
an understanding of the nonhuman world centered on ideas of balance and harmony has been
increasingly supplanted by an ecology “of disturbance, disharmony, and chaos” (Worster, 3).
This “new ecology,” associated with figures such as Daniel Botkin and Karl Zimmerer, “calls
attention to the instability, disequilibria, and chaotic fluctuations that characterize many
environmental systems as it challenges the primordial assumption of systems ecology namely
that nature tends toward equilibrium and homeostasis” (Zimmerer 1994, 109–10). As a
consequence of this reintroduction of history into the ecological realm, new ecology argues that
“when people do make large-scale changes to ‘natural’ communities of plants, animals and
insects they are not necessarily ‘disrupting’ an evolutionary harmony. . . . In terms of managing
how people use local and non-local environments, the new ecology [thus] challenges the long-
standing beliefs that the human alteration of an apparently stable eco-system is ‘bad’ and thus
conservation must proceed by way of little or no human interference” (Castree, 235).

In light of this understanding of nature, new ecology thus places itself in direct opposition
to much contemporary conservation practice, decrying the extent to which “a disproportionate
share of this ecological science is, to date, still devoted to nature protection per se, as well as to
nonhuman biota and the assumption of environmental conditions as either purely pristine or
dauntingly disturbed” (Zimmerer 2000, 360). New ecology can therefore be considered an
ecological counterpart to recent efforts by theorists in the humanities, such as Timothy Morton
and Ashton Nichols, to jettison pervasive ideas of nature that confuse and mystify attempts to come to terms with the nonhuman world. Thus, rather than a decline from some form of eternal, untouched nature to a degraded non-nature, new ecology instead provides us with the theoretical framework to make sense of transformations as the transition from one form of nature to another. Such an understanding would therefore seem to suggest that new ecology might offer a perspective much more amenable to addict octopi and “transsexual” fish as legitimate inhabitants of the nonhuman world.

However, new ecology’s embrace of a dynamic model of environmental change does not mean that the subdiscipline completely dispenses with the notion of the damaged and desirable environmental conditions; indeed, Zimmerer is at great pains to address and denounce the possibility that “nonequilibrium conditions might be construed as justification for the human-induced deterioration of environments” (1994, 109). Deterioration remains undefined, however. He even goes so far as the openly fret that a central “obstacle to integration [of the new theory] is that the ‘new ecology’ might provide an unintended apologia for environmental degradation” or be used to “justify environmental deterioration” (115). Thus, though scathingly critical of the theoretical assumptions of a nature-human binary within conservation ecology (2000, 356–60)—and in particular of the “suspect priorities of ‘biodiversity’ . . . the latest and perhaps most powerful, distinct, and one-dimensional stage of twentieth-century environmentalism” (364)—Zimmerer still seeks to retain notions of undesirable environmental change. Consequently, it becomes apparent that his argument is not so much against conservation per se, but rather better understood as an attempt to advance the theory and practice of conservation through the integration of greater awareness of human-nature interaction and changes in nature over time (ibid.). Hence, while new ecology opens the possibility of a reappraisal of unquestioned
assumptions about the relative value of different conceptions of nature, these questions are then shut down through a reassertion of the priorities of conservation and a desire to better protect, and perhaps even improve, environmental and ecological sites. This can be seen in the suggestion that the measure of new ecology should be “intact-if-not-untouched” nature (Zimmerer and Young, 8), which, in the absence of any clear definition, simply begs the question: What do we mean by “intact”? The substitution of terms provides no answers, and the anxiety of such a position can be felt in Donald Worster’s entreatng question, first offered in 1990, at the dawn of post-stasis ecology: “What, after all, does the phrase ‘environmental damage’ mean in a world of so much natural chaos?” (16). One imagines that the answer Worster seeks is not “nothing.”

Thus, while new ecology addresses the two major problems of a more traditional environmentalism, namely, the belief in a pure and static nature, it still reasserts the desirability of some form of conservation. However, whereas the older environmental system had clear criteria for the assignation of value of particular environments and natural arrangements within conservation—older was understood to be better than newer, and untouched better than human influenced—new ecology operates outside the purview of these legitimating axiological operations. Having abandoned a discourse of pristine, unchanging nature, new ecology still seeks to preserve and protect, though what exactly is being preserved and protected is not always made clear or grounded in explicit criteria of relative worth. Hence, though there is still a value judgment at play, it is now more deeply embedded and sheltered from explicit articulation and argument. Nor does the shift to a language of sustainability or “conservation-development” over conservation (cf. Zimmerer 2006, 2007) address this situation, which simply shifts the question from “What shall we conserve?” to the synonymous “What shall we sustain?” New ecology’s
inability to confront these fundamental questions of environmental value perhaps goes some way to explaining its lack of influence on mainstream environmental discourse, especially in comparison to the centrality still enjoyed by older forms of ecological thinking that new ecology ostensibly renders obsolete. In the absence of any clear justification as to why a given manifestation of nature is preferable to any other, there thus appears to have arisen a tendency to fall back on older models in order to justify specific environmental practices designed to promote particular environmental arrangements. For example, Takacs notes that “the diversity/stability [assumption] has been a cornerstone in arguments for virtually every piece of U.S. conservation legislation . . . . [B]iologists continued to use it even after a series of blows crippled the theory in the mid 1970s” (203–4). Thus while new ecology can understand changed environments as new rather than non-natures, it simultaneously lacks the means to assign environmental value under these new theoretical conditions, a situation that can lead to an adherence to older conservation standards and a persistently traditional notion of environmental damage. Although new ecology has shed the assumption that preserving the health of nature necessarily means preventing change, or indeed wholly preventing human interaction, it retains a strong sense that certain environmental arrangements are better and preferable than others (cf. Zimmerer and Young, 18): frequently those that are thought to be better bear a resemblance to those previously defended by traditional conservation. Hence, though within scientific ecology an understanding of ecological systems as dynamic and open spaces has long since challenged a model of stable and balanced habitats, the prior model continues to inform much contemporary environmental thought.

Nowhere is this perhaps more true than in regard to urban environments. Much testimony can be assembled to this effect, from David Harvey’s assertion of a “pervasive anti-urban bias in much ecological rhetoric” (3) to D. B. Botkin and C. E. Beveridge’s observation that the modern
environmental movement believes that “cities are polluted, dirty, artificial, and lack wildlife; therefore, urban environments are bad. Wilderness is unpolluted and full of wildlife and native plants; therefore, it is good” (4). From the perspective of such a world view, the city cannot be aligned with nature because it is always aligned against it as an opponent: “The ability of a city’s physical structure to organize and encode a stable social order depends on its capacity to master and manipulate nature. . . . Cities, accordingly, cannot afford to let flora or fauna, wind or water, run wild” (Davis, 362). Here the urban environment is seen not as a transformation but as a degradation of nature or perhaps even a lack thereof. For some, urbanization can even be defined as a process of “denaturalization” (Wolch, 125). Moreover, I argue that this is not only a feature of older forms of environmentalism, but also that it continues to inform new ecological practice, even that which takes as its explicit subject the existence of legitimate forms of nature within cities. In taking this position, I am following the recent argument of Robert Mugerauer, who suggests that even though “now ascendant [ecological] approaches embrace complexity theory, seeing urban ecology in terms of open, hierarchical, dynamic interactions with emergent effects, most have not managed to pass out of the ontological, epistemological, or practical limitations of the old paradigm to fully accomplish the transformation. The literature of the current second phase is strongly marked by this tension between the explicit statements of holistic principles and the still dominant use of dualistic concepts and operational procedures” (Mugerauer, 31).

Consequently, the city would appear to be a limit case of new ecology: an environment that has changed too much, been too influenced by human intervention to be accounted for within new ecology’s dynamic parameters. Most of new ecology’s focus has been on the “halfway” landscapes, such as farms, rangelands, or forests (Zimmerer and Young, 9). As a result, in answer to Worster’s question—“What, after all, does the phrase ‘environmental
damage’ mean in a world of so much natural chaos?” (16)—one potential answer continues to be “the city,” or at least certain inhabitants thereof.

<1> Consider the Squirrel: The Challenge of Urban Ecologies

Yet, despite the apparent destitution of the city, this environment still gives rise to a number of alternate urban ecosystems in which can be located creatures that hover between the state of nature and the supposedly damaged intervention of man: the pigeon, the racoon, the rat, the cockroach, and the squirrel (perhaps Guatarri’s octopus as well). Such urban species speak to the survival of nonhuman life within the urban environment, and it is by virtue of their existence that I wish to argue for the possibility of a more progressive and politically attentive mode of ecology.

More specifically, such animals are important here because they survive in the city because of human activity, not in spite of it. This distinction is crucial and speaks to the way in which previously stable conceptions of animal identity and their relations to specific environments can be destabilized and reconfigured within city spaces. On the one hand, there are creatures such as the water voles of Birmingham, who have been extensively studied by Hinchliffe (Hinchliffe et al. 2005; Hinchliffe and Whatmore 2006; Hinchliffe 2007), and, on the other hand, there are those such as pigeons, racoons, rats, and squirrels. The difference between the two is that whereas few would be surprised to find animals from the second category, or their local variants, within a given cityscape, “for conventional ecology, with its implicit and sometimes explicit hierarchy of spaces from the pure to the despoiled, this relative success of the urban water vole is a surprise. In this schema, cities are the last places to find refuge, and the first places from which nature has fled” (Hinchliffe 2007, 128). For Hinchliffe, the water voles
represent an opportunity to challenge “one of the enduring elements of anti-urban, Euro-American environmental thinking . . . a firm separation between cities and nature. Cities are not where we go to find nature” (124). By virtue not only of their survival but also their transformation within the city of Birmingham, Hinchliffe positions the water voles as evidence of how nature can adapt within the city and form “recombinant ecologies”—new dynamic and nondiscrete biological and ecological arrangements—that challenge the divisions and distinctions of traditional conservationism (Hinchliffe and Whatmore, 123). Thus the Birmingham water voles stand as evidence of how the city is more than just an “urban fall from edenic nature, [but instead] the urban can be regarded as an addition to, rather than always being a subtraction from, ecological relations” (Hinchliffe 2008, 93).

However, the water vole represents only one possibility of life within the city, and one overdetermined by the conditions of its discovery and role within the cityscape. For the urban water vole initially comes to Hinchliffe’s attention because its existence is a matter of dispute in ongoing “development” negotiations. The water vole is thus still a candidate for conservation, and in different articles and chapters Hinchliffe details at some length the extensive steps taken to determine the presence of the water voles and enact conservation measures. Indeed, the celebration of the water vole is to a large extent reliant on its status as a form of “urban biodiversity [that] is starting to be accorded the kind of conservation significance once reserved for rural and sparsely populated regions” (Hinchliffe and Whatmore, 123). So positioned, these water voles therefore represent the extension of conservation priorities into the city, rather than a challenge to those priorities: they are animals discursively aligned against the degraded city environment, and their discovery is therefore received as a revelation that nature can still survive within this urban space. Moreover, the presence of the water voles is by no means evident, but
instead must be deduced through the elusive art of reading “water vole writing” (Hinchliffe 2007, 129–30). Their scarcity and invisibility mark the water voles as less ostentatious and perhaps even vulnerable city dwellers: they do not bother us without our permission and even invite our help. Thus, whereas Hinchliffe states that it is for “conventional ecology” that the urban water voles constitute a surprise, it also appears that they are surprise, or at least a novelty of sorts, for new ecology: a distinct and different, and therefore apparently privileged ecological arrangement, that needs to be protected against the encroaching city.

In contrast, no one would be surprised to “discover” a squirrel in a North American city and would certainly not enact measures to protect it from the encroachment of an urban environment. Such a process would be ridiculous because the squirrel has a proven ability to thrive following the “destructive” processes wrought by urbanization. As such, the city squirrel is an entirely urban animal that lives in the city by means of the city. For the squirrel, the city is not impoverished but is plentiful. This sets the squirrel in opposition to the water vole, which, though it lives in the city, does so in spite of the changes urbanization brings. As the city intrudes upon a prior environment, urban animals such as the squirrel thrive and prosper relative to more “natural” animals such as the water vole, a process summarized in all its inherent prejudices and assumptions by Anne Spirin’s declaration:

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Most native wildlife cannot survive in the harsh, impoverished habitats of the city. Those that do thrive in the city are opportunists who adjust their behaviour to human activities and structures: by using food stores and garbage for food, and buildings, gardens, and small woodlots as habitat; or by attracting human companionship. Pigeons, starlings and house sparrows replace song birds; hosts of
rats infest buildings and sewers. . . . Most of the wildlife that does survive are not natives, but immigrants like rats, roaches, and scavenging birds, who adapted long ago to a landscape dominated by humans. These become pests when the city’s rich food source—created by careless food storage and garbage disposal—supports a burgeoning population which is unchecked by predators. (207)

Thus one form of nature is poisoned by the city, while other lesser forms thrive: the first form represents the power of life to somehow hold on within the pollution and stress of urban life, and is therefore to be protected and encouraged. The second form, however, lives because of the pollution and stress, or at least because of their corollaries of waste and urban structures. This second form of nature is less likely to be the subject of conservation and protection than of deterrence, control, and culling.

What sets squirrels and other forms of similar urban wildlife apart is that they can be said to flourish in an urban environment. The suggestion that squirrels flourish within their urban and suburban environments may strike some as speculative. However, I would attest that the opposing view—that the squirrel lives a compromised life of quiet urban desperation—is equally speculative and furthermore overdetermined by the previously considered need to declare the city to be a corrupted space. Following Anna Tsing, I thus suggest that “there is a lot we may never know about the motivation and behaviour of nonhuman organisms, but we can imagine that they, like us, want to live” (172), and therefore we should at least consider the notion that increased access to food, shelter, and safety constitutes one potential form of flourishing. Consequently, one possible measure of flourishing can be seen in increased population density, as, for example, in the findings that there is a higher abundance of squirrels in “urbanized sites
with high numbers of large trees, bird feeders and where pets were absent” than in other agricultural or forest sites: in general, “sites near human habitation with more trees supported more squirrels” (Bowers and Breland, 1138). Indeed, several studies have indicated that squirrel density is higher in urban than nonurban areas, with the highest squirrel density ever recorded in Lafayette Park, Washington, D.C., where those squirrels exhibit notably higher daytime activity than their nonurban equivalents (Parker and Nilon, 24; Spirin, 213). Conditions were so favorable for squirrel populations in Lafayette Park that when squirrels were trapped and removed, other squirrels would almost immediately migrate from surrounding suburbs to occupy the recently vacated territory (Spirin, 212). Nor is urban flourishing restricted to squirrels; other animals such as racoons also thrive in the city, which can support racoon population densities more than thirty times those of wildlife refuges or rural areas (Spirin, 210). By flourishing, these nondomesticated urban animals challenge environmental conceptions of the city as wasteland. By demonstrating that the change in environment occasioned by urbanization can lead to the expansion of species populations, creatures such as the squirrel and the racoon demonstrate that for some the city is environmental improvement, rather than deterioration. Urban animals confront us with the possibility that the city is not an ecological wasteland but instead is a potential thriving site of life, one in which humans play a substantial and complicated role. However, rather than provoking any reexamination of environmental antiurbanism, the intrusion of urban animals does not usually result in a reassessment of the ecological capacity of the city. Instead, the dominant logic appears either to overlook these animals or instead implicate them within the schema of damaged nature. For daring to inhabit and thrive within the urban space, the squirrel is not celebrated and acknowledged but instead is rebranded with the designation “vermin” or “pest” and thereby discursively marginalized.
“Vermin” and “pest” are not technical terms: they designate mutually inclusive categories open to any animal that is perceived to be annoying, disruptive, or unwanted. In this sense, the categories “vermin” and “pest” can be understood as analogous with Mary Douglas’s notion of dirt as “matter out of place . . . [which] implies two conditions: a set of ordered relations and a contravention of that order” (35). Likewise, vermin or pests are animals out of place, and the system they contravene is the natural system of order, organization, and hierarchy that holds sway in the state of nature. According to a conservationist logic of nature, animals are supposed to suffer, not prosper, in nominally degraded environments, but in contradiction of this edict, vermin and pests thrive within the degraded landscape of the city. By surviving—perhaps flourishing—in the city, squirrels and their ilk thereby threaten to upset the deeply held assumption that the city cannot constitute a healthy environment. To make sense of this paradox, while retaining the established and persistent view of the city as a damaged space, this ability to thrive within urban environments is interpreted as evidence of the inherent unfitness of undesirable urban animals:

Cockroaches, rats, pigeons and weeds are all pests. . . . These species are extremely adaptable and able to live, indeed, thrive under the most degraded conditions. When ecosystems are disturbed, [such] species are able to rush in and occupy any biological vacuum left in the wake of some disaster, be it man-made or natural the biological success of these highly opportunistic species presents a serious threat to the planet’s biodiversity—the complex, highly diversified web of life that constitutes and sustains the Earth’s array of ecosystems. (Patell, 62)
The designation “pest” thus carries out ideological work similar to that which denounces Guatarri’s octopus for surviving under conditions deemed to be harmful. Pests cannot contribute to the overall global biodiversity; they can only threaten it. However, the logic here is circular: cities are thought to be degraded ecosystems because nature cannot flourish there, but the reason that nature is not thought to flourish there is because the city is degraded. However, in their contravention of this circular edict, urban wildlife confuses and challenges this conservationist classification. Therefore, in order to square the circle, urban nature is rebranded as nonnatural. Rather than evidence of life within the city, become evidence of nonlife or lack of life, indicators of disturbance or deterioration, rather than proof to the contrary. Thus transformed, urban nature no longer counts as a “good representation of nature,” or as “true” nature at all (Hinchliffe et al., 645). Hence, just as within conservation discourse certain species, such as rhinoceroses, are made to stand as proxies for desirable ecosystems (Bowker, 111), vermin become proxies for urban ecosystems thought to be deviant or damaged. As vermin, an animal such as the squirrel thus becomes the representative of degraded and damaged environments.

The consequences of this demotion from legitimate animal to vermin completely alter the ecological status of the squirrel, which is no longer to be preserved, but instead now must be eradicated in order to restore proper environmental functioning. Vermin are living dirt, pollution with legs, germs rendered macroscopic. No longer subject to the “sentimental eye” reserved for other animals, pests and vermin are instead “seen as emblems of decay and contamination, as potentially chaotic elements, these animals are symptomatic of our inability to control all the variables in nature. . . . Against the general impetus to protect and preserve Nature, pests are seen as that which much be destroyed, lest they destroy us” (Dion and Rockman, 8–9). Beyond representatives of decline and decay, vermin may even be thought of as agents of degradation
and the enemy of other, more proper and desirable forms of nature (Wolch, 127). Thus transformed, vermin are “wild” animals without any of those rights usually afforded such creatures, and thus they can be killed by anyone at any time: in this they bear a family resemblance to Giorgio Agamben’s notion of “homo sacer” (71–74). It should hopefully be clear that this is in no way simply a scientific ecological designation, but instead an axiological category of intertwined aesthetic and moral disgust, similar to the “blatant repulsion” that greets “bioinvasive” species “as ‘creeping’, ‘insidious’, ‘inexorable’ and ‘explosive’” (Clark 2002, 106). In similar terms, pests and vermin are “dangerous,” “disgusting,” “noxious,” “objectionable,” or “injurious.” This state of affairs corresponds to Douglas’s observation that communities can act to account for matter that challenges the existing system of interpretation by either reframing such matter as the exception that confirms the general validity of a rule, or by attempting to exterminate the offending element (39). Thus, having been reframed as vermin rather than as a proper animal, the urban animal no longer needs to be accounted for in environmental calculations. It is as a result of such logic that Andrew Ross can complain that “rat and pest control” has not been given the priority of “wilderness and natural-area preservation” as part of a general ecological project (Ross and Bennett, 15) and not appear to be in contradiction. The eradication of vermin is deemed completely in keeping with the ecological project because vermin are not animals, just as the city is not a functioning ecosystem. Similarly, under such conditions, it is no longer oddly hypocritical to speak of a “squirrel density problem” or to declare that “rats, squirrels, starlings, pigeons, and house sparrows will probably always reside in the city, but a more diverse and abundant urban wildlife with the aesthetics and educational benefits it entails can be achieved with management” (Spirin, 214, 226). Vermin and
pests are no longer animals and therefore can appear as the enemy, rather than the potential subject, of conservationist projects.\textsuperscript{5}

What would it mean, though, to accept urban animals not as vermin but as proper citizens of the state of nature? This does not mean that all urban animals should become the water vole: they do not need to be protected from the city, because the city is absolutely their home. Urban animals are of, rather than against, the city. Instead, it means refusing the invitation to view urban animals as indicators of degradation or decline and instead perceive them as representatives of a different, but still viable and valuable, environment. In the rest of this essay, I want to take up this question directly through the example of the squirrel in order suggest several different ways in which we could possibly address urban nature in order to arrive at alternate understandings of the city, ourselves, and our implications within the wider environment. These are not meant to be final readings of squirrels as distinct and discrete animal objects so much as attempts to account for the ways in which we relate to the urban animals of our everyday lives, or, in the words of Donna Haraway, the ways in which “animals ‘hail’ us to account for the regimes in which they and we must live [and how] we ‘hail’ them into our constructs of nature and culture, with major consequences of life and death, health and illness, longevity and extinction” (2003, 17). Elsewhere, Haraway describes this interaction as a “dance of relating,” which is always situated within particular histories, as well as what she calls “naturecultures”: contingent and specific relations built of past, present, and future experiences, where the different participants—in this instance, squirrels and humans—mutually inform and shape one another (2008, 25). In what follows, then, I attempt to map out the steps of some of these squirrel-human dances in order to consider what the squirrel might teach us about our place in the city, the world, and the relevant naturecultures we share.
First, I wish to examine the manner in which, by establishing ecosystems in which humans play a crucial if unwitting role, squirrels suggest a means by which to demonstrate humanity’s implication within wider environmental systems. Centrally I want to suggest that the process by which squirrels build ecological connections to urban humans, often out of sight and occasionally in conflict with human interests, can be understood as what I will refer to as “unilateral domestication.” Unilateral domestication takes place when humans inadvertently create conditions amiable to animals. I use the term “domestication” in the sense that Haraway suggests, as “an emergent process of co-habiting, involving agencies of many sorts and stories” (2003, 30), and I refer to it as “unilateral” because humans have little choice in the matter. The adaptation of urban animals to human structures takes many different forms, from the squirrel colonization of Lafayette Park to the occupation of downtown cores around the world by birds such as pigeons:

In reshaping nature to suit ourselves, we have inadvertently created a pigeon’s paradise. Everything they need can be found in our cities and towns in greater abundance than nature provides. As natural seed eaters that prefer to forage on relatively bare ground, rock doves took readily to cultivated grains and deforestation—in other words, pecking at bread crumbs on paved streets. We also provided them with unparalleled nesting opportunities. Structures built by humans supply the sheltered holes and ledges which rock doves require, and which can only be found in caves and on cliff sides in the wild. (Palameta, 32)
This process of unilateral domestication also helps us understand why animals that take part in this process might be ripe candidates for discrimination and aggression. In the enactment of their agency across the urban landscape, the interests of urban animals frequently come into conflict with those of humans. For example, squirrels are frequently viewed as pests and nuisances who damage crops, trees, homes, and electrical infrastructure (Steele and Koprowski, 8). In Lafayette Park, the squirrels only drew the attention of authorities after they were held responsible for damage to trees and flowers: “Between early spring and late summer of 1977, gray squirrels destroyed 2,000 geraniums and damaged newly planted trees worth approximately $4,500” (Spirin, 212). Moreover, even in the absence of such behavior, the squirrel and other urban wildlife are always thought to carry the threat of disease, the potential to cause minor damage to infrastructure and more desirable urban flora and fauna, and the undefined menace of “nuisance” (207–11).

The second reason such unilateral domestication might invite rejection is the manner in which the disruption and imposition of nonhuman agency upon the city always threatens to disrupt assumed narratives of human-animal relations. Haraway suggests that masculinist, technophilic narratives of canine domestication recast what was in practice a mutual project as one of domination: “Man took the (free) wolf and made the (servant) dog and so made civilization possible. . . . Let the dog stand for all domestic plant and animal species, subjected to human intent in stories of escalating progress or destruction, according to taste” (2003, 27–28). Needless to say, Haraway rejects this narrative as an unwelcome and unwarranted fantasy that denies the agency of the nonhuman when it fails to take into account the manner in which early dogs integrated themselves into human society for their own benefit (29). However, in this instance, I wish to reclaim this narrative, this time on behalf of urban animals, who have come to
thoroughly interpenetrate our societies and communities, despite persistent efforts to stop them doing so. Just as pests in general can be seen as “symptomatic of our inability to control all the variables in nature” (Dion and Rockman, 8), the squirrel in particular demonstrates the ability of urban nature to impose itself on humans. Here it is the squirrel who is dominating humans against their will, reconfiguring not only themselves and their own squirrel environment but also humans and their environment, interjecting themselves into our lives unannounced and thereby enacting a minor but powerful form of domination upon the city and its human inhabitants. Therefore, while squirrels are probably not “companion-species” in the sense articulated by Haraway—there is a lack of body-to-body contact or direct sustained interaction between humans and squirrels,⁶ which seems central to Haraway’s use of the term—they can be thought of as companions on a wider level more akin to the social. Squirrels no doubt have some interaction on the bodily level, but they are more important at the level of social arrangements, institutions, and structures. While squirrels do not often physically interact with us as bodies, they do penetrate our community and thereby remind us that what we treat as cultural is actually still an ecosystem. Squirrels are therefore not so much family members as fellow citizens in the modern metropolis.

This engagement with the squirrel as a member of our community brings me to a second, more directly political account of squirrel-human interaction. Writing with regard to the science-fiction film 12 Monkeys, Joanne Gottlieb suggests that the film’s climax, where activists release a zoo’s-worth of animals onto the streets of Philadelphia, can be understood as an “anomalous introduction of these animals into urban space [that] marks the reintroduction into urban space of a nature that is anything but native or originary, a reintegration of nature and city that, albeit glorious, is either tragically misguided or simply fantastical” (246). Gottlieb argues that such an
act constitutes a feat of zoological détournement: “defamiliarizing, halting, foregrounding, and questioning the nature of the city” (247). Building on this example, what I suggest is that the squirrel can also be seen to encapsulate this radical potential, but within the spaces of everyday life rather than a fictionalized text. Just as the liberated zoo of \textit{12 Monkeys} transforms the city into a fantastic and unfamiliar place, so might the squirrel, if it were to be understood as a legitimate animal. However, by defining the squirrel as less than animal, the language of vermin prevents any affirmation or understanding of the radical challenge of the squirrel as an animal that interpellates its human neighbors into a reformed everyday space of urban nature. If the squirrel were acknowledged to be an animal—not denied, or despised, or even adored, but recognized as a member of an ecosystem as viable and valuable as anything found in the Amazonian rainforest—then they would radically problematize ecological understanding of both the city and conservationism.

Thus, I want to declare that squirrels are fuzzy little situationists (squirrelationists?) whose urban existence can be configured along the lines of de Certeau’s classic formulation of tactics and strategies (30–41). Living in a landscape completely dominated by the structural realization of human strategies of reordering and control, the squirrel faces a similar dilemma to many inhabitants of the modern metropolis: how to survive in a world not of their own making. The squirrel’s response is a radical refusal of the proper functions of infrastructure, as power lines and boundary fences become paths of transit, sites of waste become food sources, and the liminal spaces inside the walls of houses become possible homes in themselves. The entire life of the squirrel is an exercise in constant tactics whereby space is conceptually reconfigured in a way that not only allows them to live and flourish, but to demonstrate simultaneously that the final definition of the world does not end with the human. Rather, the human may be taken up
and repurposed by the nonhuman in ways beyond the imagination of skateboarders, parkour “traceurs,” or the most radical of psychogeographers. Hence, instead of being considered bound and determined by the forces and flows of their environmental structures, squirrels can be thought to be “making do,” in the sense suggested by de Certeau (26–28), within the particular environments in which they find themselves. Conceived in this manner, the squirrel lives in state of nearly constant transgression of the rules, regulations, and pathways of human society. Their relationship with the urban environment is not singular or determined but is instead a mass of possibilities created by the interactions of the squirrelationists with their location and the problems and potentials it provides them.

Thus, squirrels are not bound to one optimal, proper ecosystem but instead, like humans, can take on different ways of living depending on where they find themselves. While the city, from the conservationist position of ecology, is a debased site, from the squirrelationist position it appears as no more than a different organization of nature; perhaps it is even a superior or more amenable arrangement because in the city the squirrel no longer fears as wide a range of predators and has new ample sources of food and shelter. In the city, the squirrel is no longer oppressed—in the sense argued by Elizabeth Grosz, where oppression is “systems of harm and injustice that privilege the bodies and activities of some at the expense of others” (28)—a definition that illuminates a commonality between ecological and political structures of relation. Emerging from an a priori nonhuman form of nature to the city can therefore be thought to function in the squirrel’s favor. Within the “natural” order, the squirrel is a lowly prey species, exploited as part of a predatory system, but in the city the squirrel throws off the chains of its ecological subjugation to emerge as more dominant and dominating, and less oppressed, political species.
The analogy with revolutionary Marxist rhetoric might appear flippant. Karl Marx himself both critiqued and advocated for Charles Darwin’s theories for locating a proto-capitalism in nature. In a letter to Ferdinand Lassalle, he welcomes a basis for class struggle in natural science (1861), whereas in a letter to Engels he critiques Darwin for applying Malthusian theory to the world of plants and animals (1862). Yet the notion here of a natural “class” struggle suggests an overlooked ramification of aspirationally-progressive green politics: if humanity is simply one species among others, how can we overlook “oppression” within the animal world, where it is thought proper that particular forms of animals exist only at the mercy of other, more dominant, species? Why can we not extend membership of the Socialist International to encompass subordinate members of “natural” hierarchies? Why would we simply seek to preserve the exploitative status quo within the domain of nature, a position that would never be accepted by progressive social activists with respect to the social? The oppression of the working class, or before them the peasant class, was historically accepted as a natural state of affairs, and it is profoundly conservative to argue that the current status quo is simply “natural” with respect to either the societal or natural worlds. Simply because a system of exploitation is sustainable does not make it equitable. Thus, while some may worry that an understanding of the human as part of the natural might give rise to a counterrevolutionary assumption that “social relations are as immutable as natural processes” (Castree and Braun, 7), I suggest we explore what might happen when we consider the opposite: natural processes as mutable sites of political struggle.

By reconfiguring environmental arrangements in terms of politics, dramatic change in particular environments need no longer be understood only in terms of deterioration, damage, and degradation. Politics provides a language where radical change can be considered a form of
revolution, and thus potentially desirable, rather than inevitably destructive. In contrast to the conservative, conservationist language of E. O. Wilson’s “One planet, One experiment” (quoted in Takacs, 200), it becomes possible to conceptualize the necessity of a multiplicity of experiments as a way of introducing a more desirable state of affairs for all involved. Thus, environmental shifts caused by human intervention need not be perceived only in terms of damage. Rather, human impacts on nature can be reconceived as transformations in material conditions of existence that enable previously “oppressed” species to overcome the limitations imposed on them by the previously existing order, and establish new ecosystems. Just as, in some circumstances, introduced species can integrate into new environments without bringing the whole system crashing down—a process that has been likened to the ways in which new (human) immigrants can join and enrich preexisting communities (Clark 2003, 175–76)—so, human transformations in nature could also be thought of as analogous to political revolutions that aspire to create more equitable ways of living. The squirrel need not scurry from shelter to shelter as the inevitable food of a prey species, but it can instead survey its new suburban habitat from the heights of a telephone pole.

The transformation wrought by the political squirrel thus brings me to my third and final point regarding the wider reassessment of damaged forms of nature. Such a perspective involves taking new ecologies’ declaration—that neither human interaction nor change necessarily equates to damage—seriously, indeed more seriously than new ecology often does. It involves wedding the observation that nature is a site of constant disturbance with the critical insight that human interaction and natural existence should not and cannot be maintained as separate entities. In such a way, we can begin to reconceptualize human “deterioration” of nature as simply the establishment of alternate arrangements of nature, alternative arrangements that are in no way
inherently unworthy of human or nonhuman attention or respect. With this new perspective, what has previously been viewed as habitat destruction can now be alternatively conceived of as the creation of new habitats. For example, oceanic “dead zones,” commonly considered sites where “no life” can persist, are actually marked by the rapid expansion of a particular form of life, algae, which in turn gives rise to new systems. As Mike Davis observes, “Deadzone communities . . . are surprisingly species-rich” (385). Similarly, a new progressive environmental and ecological perspective would complicate conventional positions on sites of urban pollution, such as the Gowanus Canal in Brooklyn. Researchers from the New York City College of Technology were reported to have expressed surprise when they discovered microorganisms surviving in the canal. Nasreen Haque stated that “microorganisms are surviving by adapting to the harsh environment there that shouldn’t survive at all” (New York City College of Technology). What does it mean to declare that a life form is surviving where it shouldn’t, as if there were some moral order designating where survival was proper and where it was not?

In contrast to the moral order inherent in such conservationist attitudes, a progressive ecology would not seek to judge the correctness of an environment prior to contact, and would thereby seek to appreciate the range of new ecosystems that arise in urban environments as valid in and of themselves. This is where the squirrel is important, because it represents a class of urban animal that has the potential to belie the declinist narrative of environmental destruction within the context of the city: the squirrel represents the difference between transformation conceived as degradation and transformation as the making possible of a new, equally viable, and potentially desirable arrangement of life. The squirrel resists being reduced to a form of ecological “scar tissue, marking both a past trauma and a healing,” as Shirreem Patell describes pest species (62), but instead declares that the break of the pest need not be conceived of as a
trauma and consequently there need not be a process of “healing,” because the squirrel as it currently and actually exists demonstrates a potentially desirable arrangement of the current system. Following Georges Canguilhem’s distinction between states of normality and the pathological, we can see that the squirrel demonstrates that the city is a “normal environment” because it can survive and thrive there (143–45). Moreover, following Canguilhem’s lead further, the squirrel is perhaps even more “normal” than other animals, insofar as it can displace older forms no longer fit in changing conditions. To judge what environments should be taken as desirable and which should not in advance is to mistake those arrangements for facts which are normal and pathological in themselves, rather than emerging as such through a process of comparison that always relies on human deliberation (Canguilhem, 144).

In contrast to such a model, a progressive ecology, taking its lead from the squirrel, appreciates that when humanity touches nature it creates new conditions, new mutations, and potentially new species just as much as it destroys old ones: “Natural scientists will show us how inventive nature can be and that destruction of parts of nature is not necessarily a destruction of nature as such. It can, on the contrary, trigger evolutionary processes” (Eder, 211). Under such conditions, cities are neither “ecological sacrifice zones” nor “ecological disturbance regimes” (Wolch, 130), but simply ecosystems in their own right. Likewise, squirrels are not anomalous, abnormal or pathological, but simply animals. This does not mean abandoning any sort of distinction, or discrimination with relation to different arrangements of nature, but simply suggesting that what is often considered the human degradation of the nonhuman world need not be considered immediately, and only, in such terms. Thus, news that urban development encroaches upon a nonhuman environment can be met with questions and considerations of the different systems of value at play, and how the desirability of certain environments is
constructed, rather than with an overdrawn and overdetermined battle of nature against non-nature. To some extent, this process has already been recognized in areas far away from the city: James Fairhead and Melissa Leach have argued that the recognition of forests as sites of human interference rather than pristine natures, replaces arguments about what is more “natural” with “difficult social and political choices about whose vegetational priorities . . . are to prevail” (177). The purpose here has been to extend these new ecological observations to the more fraught and less-reformed terrain of the city. Thus, in contrast to an apocalyptic account of ecological change, such as that offered by Norman Myers, where the proliferation of animals designated “pests” and “weeds” is an inherent and obvious problem (40–41), we are instead confronted with the real question: Is this worse, and why? As the introduction of species from one environment to another “(from another watershed, another continent, or another imagination) is often a world-destroying cut, [but also] sometimes an opening to healing or even to new kinds of flourishing” (Haraway, 288), so the transformation of an environment can also open the way to flourishing, both ecological and conceptual. Squirrels show us how transformation can offer hope as well as doom.

<1> Concluding Thoughts, or Doubting the Squirrel

In this essay, I have argued that the continuing influence of conservationist discourses within progressive variants of ecology gives rise to several structural assumptions—not least of which is a valorization of certain arrangements of nature at the expense of possible alternate conditions, by which ostensibly progressive ecology reveals itself to operate according to a fundamentally conservative politics. Environmentalism is not advocating for nature against non-nature: it is the privileging of one arrangement of nature over another as somehow inherently better. As the
epigraph describing Konstantin Paustovsky, with which this essay opens, notes, often the attribution of non-nature arises for political rather than ecological reasons. Nor does new ecology overcome this problem, for while it recognizes the dynamic and human-inflected state of nature, it nonetheless persists in identifying certain arrangements as preferable to others on the basis of axiological structures derived from older forms of ecology. Representative of this conservative impulse is a concern with animals such as the Birmingham water voles over more common forms of urban nature. A lack of concern with squirrels and other urban critters contributes to their status as nonanimals and opponents of “natural” nature. However, by reimagining the squirrel as a proper animal, a legitimate member of a legitimate environment, it becomes more difficult to see the city as a wasteland of animal suffering as compared to an idyllic pristine nature and begin, perhaps, to imagine new ways of valuing nature and comprehending the ambiguous concept of human-nature relations. In doing so, we not only take up the new ecological idea that “the myriad everyday encounters and negotiation between humans and animal lives—in cities and gardens as well as forests and deserts—[can] sustain, rather than simply destroy, the meaning and well-being of wildlife” (Whatmore, 34), but also consider the political and axiological ramifications of such practice. When the presence of the squirrel and other urban animals is acknowledged, the dominant method of ascertaining the relative value of ecosystems, from pristine to degraded, has to be revised, because the superiority of the status quo, or the past, no longer appears so self-evident.

What would happen, then, to our ecological understanding, and the attendant politics, if we were to jettison the raft of tautologies by which contemporary attitudes toward nature are most often justified? In 1998, Neil Smith called for a Left reenchantment of nature that avoided the trap of conservative protectionism or sentimental liberalism (280–83). I want to suggest,
following Smith, that in the squirrel, the oppressed and degraded inhabitant of a new nature, it becomes possible to perceive the future contours of what such a reenchantment might look like. Where the category of nature absolves us of responsibility for thinking how the world should be, the squirrel takes us back to that responsibility. When the squirrel is thought apart from nature, it asks us: Do you like me? Would you like more of me or less? There is no wrong answer to this question, but we must answer it for ourselves and not for some vision of ideal, acritical nature. I feel that to some extent this endeavor must take evolution into account, though I have not had the time or space to address such a substantial topic in the preceding pages. Moreover, this approach is not without its pitfalls. It is of course necessary at such a juncture to let the theoretical lenses that have guided this exploration drop for a second and remember that humanity has in many ways damaged nature and caused the unnecessary degradations of environments to the point where they can no longer support viable ecosystems (as least as far as charismatic megafauna are concerned, the court is still out on less-valued microorganisms), but I do not think that this obvious caveat in any ways detracts from the need to establish new means to understand and value ecosystems that can accept that change may be positive, progressive, or, at the very least, benign. I also harbor concerns that the squirrel may turn out to be more of a neoliberal entrepreneur than a situationist, but must wait for another day. Despite these concerns, I maintain that the squirrel offers a potential first move toward this new model, though it in no way provides the final contours of what an equitable, progressive model of environmental and ecological thought might look like. Considering the squirrel is the beginning, not the end, of nature.

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<NH> Notes

1 Here understood more in the sense of a political position that “holds that a sustainable and fulfilling existing presupposes radical changes in our relationship with the non-human
natural world, and in our mode of social and political life” (Dobson, 2), rather than in the sense of the scientific disciple of the same name, though it is difficult to separate the two accounts in any final or complete manner.

2 As a consequence of the particular historical trajectories of colonization and the intentional introduction of invasive species, the notion of a pristine and proper state of nature is perhaps heightened in New Zealand and Australia. In particular, the desire to prevent the corruption of native forms of nature informs and motivates the disciplinary regimes of biosecurity and contributes to the formation of a strong sense of a “proper” and “natural” arrangement of nature (Hinchliffe 2007, 103–4).

3 Lest my focus on Zimmerer be misinterpreted as some form of attack, I want to make clear that the reason he is so central to my argument at this point is that he provides the most thorough and attentive ongoing account of the fortunes and manifestations of new ecology. If it seems as if he is somehow being held to account for new ecology, it is only because he has provided the most articulate and useful articulation of the subdiscipline.

4 This situation is arguably even more applicable with respect to nonurban vermin, of which possibly the most extreme case is the New Zealand Common Brushtail Possum. In the words of Thomas Isern, an environmental historian: “Everyone [in New Zealand, at least] hates possums” (245). Originally introduced in the nineteenth century in the hopes of establishing a fur trade, possums threatened not just agricultural stocks (as vectors for bovine tuberculosis) and suburban gardens, but also endangered native flora and fauna, including the iconic Kiwi (Isern, 235–57). Thus, in a curious paradox, those who are the most dedicated to animal preservation and protection are those who hate possums the most. Possums have become the subject of a government-sponsored eradication program since the 1940s, involving trapping, shooting, and
mass poisoning. I thus suggest that possums are not just nonanimal vermin but have become a limit case of anti-animals: a creature that has not just voided its right to live, but that needs to be utterly eradicated in order to return a sense of purity and correctness to the land. The possum thus corresponds not to Agamben’s bare life, but to Carl Schmitt’s Foe-Enemy of total war (33, 36).

5 It should be noted that the city is not the only home for vermin, which can appear anywhere animals and humans come into contact. Vermin can therefore be found in the rural countryside as much as in the city. I thank my colleague Dana Mount for bringing this point to my attention.

6 One exception to this might be the practice of eating squirrels in the American South, which came to media attention after 2008 Republican Primary candidate Mike Huckabee spoke of eating squirrels—cooked in a popcorn popper—while he was at college. Some reports on the story mentioned that squirrel brains in particular are considered a delicacy, which may result in a very unfortunate transpecies exchange as squirrels are suspected to carry the prions that lead to Creutzfeldt-Jakob disease.

7 In suggesting this reading of the squirrel, I am mindful of Jeremy Gilbert’s recent and timely warnings against the veneration of tactics over strategy on the Left and the need to formulate and accept strategies as part of a productive political project (209–29). However, in the case of urban nature and the squirrel, I think the question of tactics is still worthy, both because animals have not frequently been considered in such terms, leading to an almost oppressive structuralist account of behavior in conservationism, and because the squirrel represents a life lived entirely within the bounds of tactics.

8 One might object that such a situation of domination and exploitation is indeed natural within the animal world, and it is only when it is imposed upon the human sphere that it takes up
its immoral character. However, I would remind those who seek to argue such a case that
dramatic and entrenched structural inequality was once seen as a natural in the human world, and
indeed still is in many political circles. The hierarchy of animals echoes the apparently natural
hierarchy of humans or citizens in an unequal political state, be it Stalinist totalitarianism, fascist
Germany, or neoliberal capitalism. Indeed, an unequal political state that attempts to explain its
inequality as anything but natural is most likely not destined for a long, prosperous existence.

9 Here understood within the specific boundaries of ecology, rather than physical science
in its entirety: I am not advocating for a revolutionary overthrow of the tyranny of gravity, the
Kreb’s cycle, or the Heisenberg uncertainty principle.

10 This new understanding of so-called damaged environments should not be mistaken
for a celebration of ruderal ecologies, where species have reclaimed “disturbed” land, such as the
“bomber ecologies” acclaimed by Mike Davis (380–86). While some ruderal species are
denounced as invaders and pests, the narrative of ruderal species is also frequently a heroic one:
where nature is presented as returning to reclaim non-nature, rather than one form of nature
dominating another. One example is the History Channel “documentary” Life After People;
another is Castree’s account of an abandoned Occidental Petroleum Company facility on Canvey
Island in southern England. Castree presents the island as a haven of endangered and even
previously thought to be extinct animals that have prospered since the plant was abandoned (2).
Castree thus declares that “nature has returned to this island”; however, he warns that this
paradise is, somewhat paradoxically, threatened by redevelopment. Castree, however, does not
note the irony in his fear that human degradation will “destroy” an environment created almost
entirely by what would have been regarded as human degradation in the first instance. Thus
ruderal ecologies are often those where a privileged and “proper” form of nature displaces a less
beloved form. This is the difference between water voles and squirrels, where the former symbolize nature triumphant and the latter an environment marked by the absence of a real or proper nature.

11 “When a large number of species disappear, the process tends to be counterbalanced by increased speciation, an evolutionary process that throws up new species to occupy vacancies we call the ecological living space. New species can rush in to that ecological living space, take up the newfound opportunity to grow, establish themselves, and flourish. Species especially good at exploiting these new opportunities tend to be what biologists call “r-selected”—species that are highly opportunistic. They can rush in; they are highly mobile; they are adaptable, and they can very rapidly reproduce their numbers. They can take over a situation and more or less control it unless they have natural enemies in sufficient abundance to keep their own numbers down. Some examples of these r-selected species are with us in the world right now. One is the common rat, another is the cockroach, the house sparrow, and, finally, the plants we choose to call weeds, which tend to proliferate and dominate their local environments. It is possible, even probable, that within fifty years, when many current species disappear and their places begin to be taken by others, we will have a disproportionate number of species we would characterize as “pest” or “weed” species. That is the kind of biological world our children are going to have to contend with. We might want to wish them luck” (Myers, 40–41).

12 Nor should we be tempted to fall back on biodiversity as a last recourse when answering such a question. The savannah is less species-rich, less diverse, than jungle (Takacs, 227), but this is not normally taken to mean that we should seek to replace all savannah with jungle. Why should the ecosystems of the city be any different?


