

Literature and Environment

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Abstract

Since prehistory, literature and the arts have been drawn to portrayals of physical environments and human-environment interactions. The modern environmentalist movement as it emerged first in the late-nineteenth century and, in its more recent incarnation, in the 1960s, gave rise to a rich array of fictional and nonfictional writings concerned with humans' changing relationship to the natural world. Only since the early 1990s, however, has the long-standing interest of literature studies in these matters generated the initiative most commonly known as "ecocriticism," an eclectic and loosely coordinated movement whose contributions thus far have been most visible within its home discipline of literature but whose interests and alliances extend across various art forms and media. In such areas as the study of narrative and image, ecocriticism converges with its sister disciplines in the humanities: environmental anthropology, environmental history, and environmental philosophy. In the first two sections, we begin with a brief overview of the nature, significance, and evolution of literature-environment studies. We then summarize in more detail six specific centers of interest: (a) the imagination of place and place-attachment, (b) the enlistment and critique of models of scientific inquiry in the study of literature and the arts, (c) the examination of the significance of gender difference and environmental representation, (d) the cross-pollination of ecocritical and postcolonial scholarship as ecocriticism has extended its horizons beyond its original focus on Anglo-American imagination, (e) ecocriticism's evolving interest in indigenous art and thought, and (f) ecocriticism's no less keen and complex attentiveness to artistic representation and the ethics of relations between humans and animals.

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INTRODUCTION

Literature and environment studies—commonly called “ecocriticism” or “environmental criticism” in analogy to the more general term literary criticism—comprise an eclectic, pluriform, and cross-disciplinary initiative that aims to explore the environmental dimensions of literature and other creative media in a spirit of environmental concern not limited to any one method or commitment. Ecocriticism begins from the conviction that the arts of imagination and the study thereof—by virtue of their grasp of the power of word, story, and image to reinforce, enliven, and direct environmental concern—can contribute significantly to the understanding of environmental problems: the multiple forms of ecodegradation that afflict planet Earth today. In this, ecocriticism concurs with other branches of the environmental humanities—ethics, history, religious studies, anthropology, humanistic geography—in holding that environmental phenomena must be comprehended, and that today’s burgeoning array of environmental concerns must be addressed qualitatively as well as quantitatively. At least as fundamental to their remediation as scientific breakthroughs and strengthened

regimes of policy implementation is the impetus of creative imagination, vision, will, and belief. Even though, as the poet W.H. Auden famously wrote, “poetry makes nothing happen” in and of itself, the outside-the-box thought experiments of literature and other media can offer unique resources for activating concern and creative thinking about the planet’s environmental future. By themselves, creative depictions of environmental harm are unlikely to free societies from lifestyles that depend on radically transforming ecosystems. But reflecting on works of imagination may prompt intensified concern about the consequences of such choices and possible alternatives to them.

ECOCRITICISM'S DEVELOPMENT

Ecocriticism has grown exponentially from its inception in the early 1990s as an organized initiative (1, 2). The Association for the Study of Literature and Environment (ASLE, established in 1992) (<http://www.asle.org>) has become a worldwide movement with chapters throughout Europe, East and South Asia, and Australia-New Zealand, though scholars from the Anglophone world, especially the United States and the United Kingdom, still predominate. Since Aristotle, literary criticism had taken a certain interest in “setting,” but not until the late twentieth century did it seriously engage environmental history and the environmental and social sciences. The first significant ecocritical study, Joseph Meeker’s *The Comedy of Survival*, and the term ecocriticism date from the 1970s (3, 4). Meeker’s diagnosis of archetypal comic plots as reflecting strategies of adaptation in the interest of survival (3) anticipates later interest in the pertinence of scientific models for environmental-literary inquiry. Influential studies by Leo Marx (5) and Raymond Williams (6) of pastoral traditions in American and British literatures in their ecohistorical contexts spotlighted literature as crucial to understanding the environmental transformations of urbanization and techno-modernity, influencing later work on environmental

Ecocriticism: the omnibus term most commonly used to refer to environmentally oriented study of literature and (less commonly) other expressive media, including the critical premises informing such study

Pastoral: in common usage, referring to the lifestyle of shepherds or other nomadic peoples. In literary and art criticism, stylized representation of rusticity in contrast to town and metropolis

philosophy and politics of genre, place, region, and nation. This partly explains ecocriticism's early concentration on the pastoral imagination (7, 8), on Anglo-American Romanticism (ca. 1780–1860) (by no coincidence also the start of the Industrial Revolution) (8–11), on lyric poetry in the tradition of William Wordsworth (1770–1850) and his Anglo-American successors (12–14), and on literary nature writing from Thoreau to the present (8, 12, 14–16).

Literature and environment studies have evolved significantly over time, as the most cited ecocritical collections show (17–19). First-wave scholarship of the 1990s tended to equate environment with nature; to focus on literary renditions of the natural world in poetry, fiction, and nonfiction as means of evoking and promoting contact with it; to value nature preservation and human attachment to place at a local-communitarian or bioregional level; and to affirm an ecocentric or biocentric ethics, often intensified by some conception of an innate bond—whether biological, psychological, or spiritual—conjoining the individual human being and the natural world. The phenomenological philosophy of Naess (inventor of “deep ecology”)¹ (20), Bachelard, Merleau-Ponty, and (at first especially) Heidegger influenced some of the strongest ecocritical work in this area (21–23). By contrast, second-wave scholarship (Reference 1, pp. 1–28) of the past decade has shown greater interest in literatures pertaining to the metropolis and industrialization (24–26); has tended to reject the validity of the nature-culture distinction, sometimes to the point of following Bruno Latour's stigmatization of nature as hopelessly vague and antiquated (27, 28); and has favored a sociocentric rather than biocentric and/or individual-experience-oriented ethics and aesthetics, placing particular emphasis on environmental justice concerns (19). Related developments include the reconception of place-attachment from local-focused

to transnational and/or global (29, 30) and the cross-pollination of literature-environment studies both with postcolonial literary studies and with studies of ethnic minority literatures (e.g., 31–34) in addition to Native American, which has been of strong interest from the start. These later developments are by no means the only initiatives that have taken literature-environment studies far beyond its original base in modern Anglophone writing. Today's literature-environment scholarship considers all eras of Western history (e.g., 35–38) and is increasingly influenced by criticism on and/or from the non-Anglophone world, particularly Hispanic, German, Chinese, and Japanese.

A number of other concerns have persisted amid these changes, however. Literature-environment studies have always sought at least in principle to encompass not only such specific genres as nature writing and nature poetry, but also all expressive media, including visual, musical, and cinematic as well as more purely instrumental forms of expression such as scholarly articles and the conventions of legislative documents, reports from nongovernmental organizations, and the like. Since Killingsworth & Palmer published *Ecospeak* in 1990 (39), providing a comparative rhetorical analysis of scholarly conventions across the disciplines from the sciences to the humanities, one of the liveliest fields within ecocriticism has been environmental rhetoric studies (e.g., 40–43). The possibilities of enlisting scientific models—e.g., from evolutionary biology, ecology, and information sciences—has provoked lively ongoing interest and debate. Differences in environmental perception and imagination between men and women and between “natives” and settlers have been scrutinized from the start. Another ongoing theme has been literary and other aesthetic imagination of cross-species relations—in literature for children as well as for adults (44). Across these various subfields of research, ecocriticism has sought to investigate how particular templates of storytelling and image-making shape humans' real-life interactions with the natural world in ways that are historically and culturally distinctive.

Environmental justice: movements to address the unequal distribution of environmental benefits and hazards across population groups, especially by race and/or class

¹Deep ecology is an egalitarian vision of organisms as knots in the biospherical net or field of intrinsic relations, often extended to refer to relations between the human self and the biosphere.

Turning to matters of aesthetic form, throughout both major phases of its development, literature-environment studies have made significant contributions to the understanding of a number of genres—e.g., to environmental nonfiction or nature writing; to poetic form and method (45–46); to drama/theater (47); and to “narrative scholarship” (48), an experimental prose that blends autobiographical memoir with formal analysis, as in Ian Marshall’s fusion of mountaineering literature analysis and memoir (49) and Joni Adamson’s study of the art and politics of Native American literature interspersed with reflections about her experience as a non-native critic, teacher, and activist (50). A notable feature of ASLE conferences as well as its flagship journal *ISLE: Interdisciplinary Studies in Literature and Environment* has been the copresence of contributions by both scholars and environmental writers and other creative artists.

This partiality for critical/creative compounds is linked to a common, though diminishing, complaint by academic critics both within and outside the field of its alleged resistance to “theory.” The complaint is valid insofar as ecocriticism initially often set itself against poststructuralist/deconstructionist “demystifications” of word-worlds as linguistic and/or ideological constructs rather than as the “realistic” evocations that early ecocritics often took them to be. But after the initial phase of resistance to theory, the conceptual achievements of literature-environment studies have been notable not only within the arenas discussed below, but also for their lively ongoing debates over the very issue of “ecomimesis,” i.e., environmental art’s pretensions to portray or evoke the palpable world as against its function as rhetorical or political artifact (e.g., References 1, pp. 29–61; 8, pp. 83–114; 15; 27; 51, pp. 135–84; 52, pp. 85–112).

IMAGINATION OF PLACE: FROM LOCAL TO GLOBAL

The concept of place has always been of central interest to literature-environment studies. Part

of the reason for this is intradisciplinary (to redress the historic neglect of setting relative to plot, character, image, and symbol in literary works). More significantly, however, ecocriticism’s attention to place reflects its recognition of the interconnectedness between human life/history and physical environments to which works of imagination (in all media, including literature) bear witness—hence the claim by one of ecocriticism’s earliest spokespersons that its distinctive addition to the commonly studied triad of race, class, and gender was place as a critical category (Reference 17, pp. xv–xxxii).

Literature-environment studies obviously have no monopoly on place theory, an interest shared across the humanities as well as social and applied sciences. Ecocritical thinking broadly accords with humanistic geographers who conceive place-sense as a fusion of personal allegiance, social construction, and physiographic matrix, while often differing in practice as to the relative emphasis on place-attachment at the level of imagined individual experience versus at the level of the social collective. Ecocritical partiality for “narrative scholarship” (see previous section) is partly explicable as a way of striking a balance between these two claims.

First-wave ecocriticism attached special value to the aesthetics and ethics of place-attachment at a local or regional scale, as modeled in the bioregional thinking of such environmental writer-critics as Wendell Berry and Gary Snyder, whose essayistic writings were more influential as catalysts for ecocriticism than were their fictive works (e.g., 53–56). Bioregionalism holds that the planetary future hinges on strengthened allegiance to the ecological unit, often defined in terms of a “watershed” or drainage basin, as against the jurisdictional unit—an allegiance that entails commitment to bioregion as personal habitat, interdependent human community, and sustainable physical environment, all (properly) in cognizance of the interdependences between one’s particular ecosystem and the wider world (57). Some of the most distinctive work of first-wave environmental studies focused,

accordingly, on Wordsworth as laureate and denizen of the English Lake Country (9), on Thoreau's attachment to Walden Woods and its natural history (8, 58), on the intimacy of the late Romantic poet John Clare's tie to the vanishing traditional landscape of early nineteenth-century Northamptonshire (23), on Robert Frost's achievement as the poet of upcountry New England at its turn-of-the-twentieth-century moment of postagricultural reforestation (59), on John Muir's sense of wilderness as home as grounded in his Scots-diasporic boyhood in rural Wisconsin (60), and on the sensitively local knowledge and place-attachment of Thomas Hardy's Wessex novels (61). These and similar studies delivered a powerful, calibrated analysis of literature's capacity to memorialize and transmit what place-sense means—especially at a comparatively local as well as rural level.

That achievement, however significant, also came to be seen as insufficient. Although bioregionalism in principle, as Snyder cautions, "is not just a rural program" but is "as much for the restoration of urban neighborhood life and the greening of cities" (Reference 55, p. 43), first-wave literature-environment studies tended in practice to focus on exurban environments. This explains in part the shift that began around the start of this century toward greater prioritization of landscapes that are metropolitan and/or bear distinct marks of industrial transformation (24–26, 62). More fundamentally, however, the prioritization of the region as the preferred ecological and cultural unit in early ecocritical place theory came under question. Environmentalism had defined itself from the beginning as a global as well as local mode of thought through its appeal to the "Blue Planet" image of Earth from outer space and its slogan "Think globally, act locally." Increased interest on the part of literary scholars in globalization processes and the forms of identity they help to generate—variously approached through such labels as transnationalism, cosmopolitanism, borderlands cultures, diaspora, hybridity, *mestizaje* (mixtures of indigenous and European ethnicities and cultures in Latin America),

and nomadism—began to exert pressure on a perspective mostly focused on the local and the regional. Finally, public discussion of global environmental problems such as biodiversity loss and climate change made obvious the need for ecocritical discourse to develop new ways of addressing global interconnectedness and less obvious the idea that local place or region was the only or best way to do this.

Environmental justice ecocriticism, which sought to show the structural links between social and environmental problems, fell short of making the shift to a genuinely global perspective as long as it focused on the environmental rights of U.S. minorities alone and pitted a minoritarian sense of place against that of the white Anglo mainstream, still relying on the same trope of rootedness (e.g., 63). But it broadened this perspective when it began to include fights for environmental resources and health elsewhere in the world, even though it continued to highlight the primacy of the local (64). A different strategy for opening up the local to the global was to reconceptualize place as a node in a global network by highlighting that "[t]here is no such thing as a local environmental problem" because all such problems form part of a network of global processes and issues (Reference 65, p. 7). From this perspective, the observation of local phenomena such as bird migrations or manifestations of climate change became a point of departure for understanding and emotionally relating to global ecological processes. Similarly, perceptions and experiences of environmental risk shared across borders emerged as conceptual hinges connecting local to transnational forms of inhabitation (66).

Intersections between ecocriticism and postcolonial studies that began to be explored in the early 2000s marked a further stage in the integration of discourses about the local and the global. In the encounter between these two areas of study, it became clear that ecocritical frameworks had most often been national or even nationalist, whereas postcolonialist approaches tended to focus on transnational and cosmopolitan webs of connection. Additionally, whereas ecocritics had emphasized ties

to place, postcolonialists had foregrounded displacements. Further differentiating these studies, ecocritics had valued purity in ecosystems and places over the moments of hybridization and border-crossing that most interested postcolonial scholars (67, 68). The relationship between local and global frameworks had also been envisioned quite differently: Ecocritics usually projected harmonious, widening circles of concern and involvement from the local to the global and sometimes the cosmic, whereas postcolonial scholars tended to stress tensions and disruptions between local and global frameworks of experience (68). Exploring such conflicts and convergences between the study of colonial domination and ecological degradation produced a more fluid perspective on the sense of the local as one, but not the only possible gateway to environmental awareness and ethics. By contrast, transnational and “ecocosmopolitan” perspectives conceiving all attachments to place, region, nation, or world as outcomes of particular cultural practices came to be seen as an increasingly powerful approach to understanding both cultural and ecological forms of planetary connectedness (29).

LITERATURE, SCIENCE, ENVIRONMENT

Ecocriticism’s relationship to the natural sciences has always been extraordinarily ambivalent. Ecocritics, like environmentalists more generally, rely on the insights of biologists, ecologists, and chemists as the basis for their claims about the state of nature, and research findings from the natural sciences provide much of the social legitimation for efforts on behalf of conservation. But some ecocritics also see science and technology as root causes of ecological crisis, both in reducing nature to a mere object to be studied and manipulated by a detached observer, and in amplifying people’s ability to inflict damage on nature. Consequently, ecocritical analyses have argued for a range of discrepant perspectives regarding the role of the natural sciences in cultural inquiry.

Some ecocritics see the connection of their work to scientific research as the distinctive

mark of literature-environment studies compared with other types of humanistic inquiry. They envision theoretical biology and the cognitive sciences as, ideally, the foundation for cultural research. Joseph Carroll and Glen Love, for example, in the spirit of E.O. Wilson’s “consilience,” aim to make evolutionary theory the basis for literary and cultural research. Culture, they argue, is based on the “adapted mind,” “a biologically constrained set of cognitive and motivational characteristics” (References 69, p. vii; 70), and cultural phenomena should, therefore, be explained in terms of what they accomplish for human adaptation and survival. This approach has yielded some interesting theories about what may have triggered the emergence of, for instance, storytelling (71–73). However, this approach has found little resonance in ecocriticism, not only because many scholars in the humanities shy away from theoretical paradigms that hearken back to the determinisms of sociobiology, but also because the adaptationist approach, with its concept of human nature as a “universal, species-typical array of behavioral and cognitive characteristics” (Reference 69, p. vii), provides few grounds for the historically and culturally specific analyses typically practiced by those within literary studies. Furthermore, adaptationism’s emphasis on human anatomy and physiology, which has not changed substantially over the past few thousand years, is ill-suited to explain the enormous variability of cultures over the same time period.

For most ecocritics, ecology has played a more indirect role. Considered more synthetic than other sciences, ecology, especially in ecocriticism’s first phase of development, was often understood to provide an account of the natural functioning of ecosystems as stable, harmonious, and homeostatic if not disrupted by humans. Societies that understand and adapt themselves to this state of nature, it was thought, are or become freer, fairer, and more sustainable. Literary works that portrayed such harmonious interrelations between individuals, social communities, and their natural surroundings, such as the poetry of A.R. Ammons, Wendell Berry, Robinson

Jeffers, W.S. Merwin, and Gary Snyder as well as a great deal of Native American literature (12, 74, 75) were singled out for praise in that they seemed to present models of sustainable living. Such perceptions of ecology as well as of the literary texts that allegedly exemplified them came under attack in the early 2000s for misconstruing, in the critics' view, both the dynamic evolution of ecosystems over time and the aesthetic texture of literary works that makes them something other than realist documentations of nature (51, 76). A similar questioning of ecology as the science of natural harmony had already taken place earlier in environmental history (77, 78), making it more difficult in both disciplines to establish simple lines of connection from ecological science to cultural values and particular forms of storytelling. Such connections were also complicated by a somewhat different critique that targeted not only humanist misunderstandings of science but also the implicit values informing some types of scientific inquiry. Feminist and queer theorists (see the Gender section, below), for example, targeted heteronormative assumptions in certain kinds of scientific explanations of animal behavior (79, 80), and others highlighted the value judgments underlying such apparently neutral terms as biodiversity (81). In ecocriticism, the prominence of science diminished considerably as a consequence of these critiques that suggested ecological science could not in any simple manner be translated into social models and cultural values.

That large-scale integrations of the natural sciences and literary studies have remained unsuccessful, however, does not mean that the two fields have failed to engage with each other in more limited and specific ways. The dialogue between science and storytelling is particularly obvious in the representation of such issues as chemical contamination and radioactive fallout. Scientists and science writers from Rachel Carson to Sandra Steingraber have mobilized narrative as a way of making the impact of environmental toxins intelligible. Conversely, writers and filmmakers such as Ishimure Michiko, Don DeLillo, Vladimir

Gubaryev, Christa Wolf, Cherríe Moraga, Richard Powers, Todd Haynes, Suzanne Antonetta, and Ruth Ozeki integrate scientific facts, figures, and documents into their stories, plays, and films about environmental contamination and its consequences for humans and the natural world. Ecocritics have investigated this rhetoric of toxic and radioactive pollution in great detail, as it raises complex questions about what makes an environmental crisis come to seem "real" to the reader (26, 82, 83), what cultural assumptions about risk inform such accounts (29), and what conceptions of the human body and its porous boundaries with the environment these accounts articulate (52).

Many other fields of scientific inquiry, such as botany (especially in its connection with agriculture and gardening), ornithology, genetics, and conservation biology are addressed, often in minute detail, in environmentally oriented verbal and visual works. Indeed, partly because of this interest in blending scientific findings with aesthetic textures, environmentalism has found particularly rich expression in the genres of nonfiction prose and, in film, the nature documentary, genres that have not been as prominent in the other fields of cultural production that emerged from the new social movements of the 1960s and 1970s. Compared with the novels, poems, plays, and feature films that have made the feminist, gay, civil rights, and anti-colonial movements such towering presences in literature and the arts, the hallmark of environmentalism has been a kind of prose and film that sits at the intersection of narrative and science, blending the endeavor to convey a scientific perspective on environmental crisis with the impulse to tell large- and small-scale stories about humans' interaction with nature. Annie Dillard's Pulitzer-Prize winning *Pilgrim at Tinker Creek* (1974), for example, blends detailed observations of the natural world with the author's reflections on the human meanings of life and death, whereas Ishimure Michiko's *Kugai jōdo* (*Paradise in the Sea of Sorrow*, 1969) combines personal narrative with legal and medical documents in the attempt to portray the suffering of victims of Minamata disease, an epidemic

Ecofeminism:

ecologically conscious
feminist critical
practice centering on
claims of distinction or
difference of
environmental
perception,
imagination, value,
and behavior
according to gender

of mercury poisoning caused by toxic waste disposal in Japan between the 1950s and the 1970s. German novelist Christa Wolf, writing in what was then East Germany, blends science and storytelling even more seamlessly in *Störfall: Nachrichten eines Tages* (*Accident: A Day's News*, 1987), a novel that contrasts the description of the protagonist's brother's brain surgery with the emerging news about the nuclear reactor explosion at Chernobyl. This double plot allows Wolf to juxtapose different perceptions of advanced technology, different experiences of risk, and different perspectives on the role of science in mediating contemporary humans' relationship to their own bodies and a world invisibly but irretrievably contaminated. Wolf's literary engagement with science and the environment was taken so seriously that it led to public, controversial, and politically charged discussions about the novel among scientists, intellectuals, and artists in print and at the East German Academy of Arts between 1988 and 1990.

In a somewhat different twist, writers from the developing world often juxtapose scientific investigation of the natural world with indigenous forms of knowledge. In Cuban-Puerto Rican novelist Mayra Montero's *Tú, la oscuridad* (*In the Palm of Darkness*, 1995) and Indian writer Amitav Ghosh's *The Hungry Tide* (2004), for example, Western scientists visit Haiti and the Sundarbans archipelago on the Bay of Bengal, respectively, to study endangered species. Both scientists contract local guides who are illiterate but intimately familiar with local topography, flora, and fauna through lifelong inhabitation and experience. Deep-felt bonds develop between the scientists and their local informants because of their shared love for the natural world and in spite of persistent cultural, linguistic, and socioeconomic gaps. Neither Western science nor indigenous knowledge emerges as the privileged mode in these portrayals, but their combination, even though the forces of nature, in both texts, end up severing the friendship through the death of one or both protagonists. The fusion of different epistemologies may be precarious

and temporary for the moment, these endings suggest, but ultimately necessary for an altered relationship between humans and their environments in an increasingly globalized world.

GENDER

Although commonly identified with the radical political movements of the 1970s and 1980s, ecofeminism (environmental feminism) has a much longer history, perhaps even extending back to prehistoric goddess worship (References 84; 85, p. 281). The term ecofeminism was coined by the French feminist Françoise d'Eaubonne in 1974 to represent women's potential to instigate an ecological revolution entailing new relations between women and men and between people and nature in the name of ensuring human survival (Reference 86, p. 84). Ecofeminist discourse generally argues that the exploitation of nature and that of women are intimately linked, with some ecofeminists claiming "a parallel in men's thinking between their 'right' to exploit nature, on the one hand, and the use they make of women, on the other" (References 87, p. 26; 90, p. 75). Ecofeminism also argues that the battle for ecological survival is intrinsically intertwined with the struggles for women's liberation and other forms of social justice (References 88, p. 75; 89, pp. 177–78). Greta Gaard and Patrick D. Murphy further characterize ecofeminism as "based not only on the recognition of connections between the exploitation of nature and the oppression of women across patriarchal societies" but also "on the recognition that these two forms of domination are bound up with class exploitation, racism, colonialism, and neocolonialism" (Reference 90, pp. 2–3). Women's conventional association with the natural world, claimed to be ubiquitous (91), is exalted by some ecofeminists who seek to promote a mirror-opposite of patriarchal constructions. These ecofeminists argue for acknowledging a "women's spirituality" grounded in female biology and acculturation, one that takes account of the "holistic proclivities of women" (References 2,

p. 24; 92). As Catriona Sandilands has observed, those who promote what she slightly calls “motherhood environmentalism” understand women—as bearers of children and guardians of “family sanctity”—as having a heightened awareness of ecological destruction (Reference 79, p. xi). It is women, they believe, who will “green” society and improve the environment, primarily from the private sphere.

Such forms of radical ecofeminist essentialism have been critiqued from economic, philosophical, and sociological perspectives. Appeals have been made for more sophisticated examinations of relationships between gender and the nonhuman, as these involve etiologies, progression, and remediation of environmental degradation. Some critics, including Sandilands, have argued that embracing flexible understandings of gender and other identities will make feminism a more democratic enterprise (Reference 79, p. xx). Carolyn Merchant proposes a compromise of sorts with the “ethics of earthcare,” an ethics that “neither genders nature as female nor privileges women as caretakers, yet nonetheless emerges from women’s experiences and connections to the earth and from cultural constructions of nature as unpredictable and chaotic” (Reference 86, p. xii). For her part, Stacy Alaimo argues that the effort to purge feminism of all “essentialism” is one of feminist theory’s most notable attempts to escape nature. She stresses that banishing nature from culture “risks the return of the repressed and forecloses the possibilities for subversive feminist rearticulations of the term” (Reference 93, pp. 4–6). Many believe the link between the subordination of women and the destruction of ecosystems stems not from an essentialist identification of women with the nonhuman but instead from women’s social position, perceiving a material connection between the externalization and exploitation of women and the abuse of natural resources (Reference 94).

Some of the most exciting current research in ecofeminism focuses on the body, as scholars critique masculine assumptions that bodies are immune to environmental impacts by acknowledging their permeability. Alaimo’s

Bodily Natures (52), for instance, examines how movements across human bodies and nonhuman nature alter our senses of subjectivity, ethics, and scientific knowledge. Intersecting with ecofeminism is queer environmentalism, or queer ecology, which interrogates the many relationships between sex and nature in human society, including the heteronormativity of much environmental discourse. It aims to help develop both a sexual politics that demonstrates a clearer understanding of the biosocial constitution of the natural world and an environmental politics that takes into consideration how sexual relations influence nature and our perceptions of it (Reference 80).

Grounded in ecological feminist thought, ecofeminist literary criticism can be broadly understood as politically engaged discourse that analyzes conceptual connections between the manipulation of women and the nonhuman. Such work has examined how narrative fiction has written nature as a feminist space, allowing writers to transform “what is into what could be” (Reference 93, p. 22). It has also explored the differences between men’s and women’s depictions of nature as well as how creative texts intertwine discourse on women and the environment with discussion of diverse forms of social injustice. Such scholarship has provided numerous insights into the multiple paradigms and fantasies concerning the nonhuman—particularly relationships between women and nature—embraced by writers and literary characters of both genders. For instance, Lorina N. Quartarone has examined how the *Aeneid* both reinforces and complicates dualisms, drawing and then erasing clear lines between nature/culture, female/male, and body/mind, as well as connections between female/nature (Reference 95). Annette Kolodny’s readings of men’s and women’s writings on Western landscapes reveal men as responsible for massively exploiting and altering the continent and women as concerned with “locating a home and a familial human community within a cultivated garden.” These fantasies may seem relatively tame, but when examined in their contemporary milieu, they “emerge

as saving and even liberating” (Reference 96, pp. xii–xiii).

Scholars drawing on ecofeminist thought have enhanced our understanding of creative articulations of environmental abuse. Insufficient attention has been given, however, to the ways literature degenders ecodegradation, either by depicting women as complicit in damaging ecosystems or by portraying ecological distress, its perpetrators, and its ameliorators as involving human beings in general. At the same time that it features a nursing woman being literally sucked dry by her children and community, Kim Hyesun’s poem “Kkōpjil ūi norae” (“Song of Skin,” 1985) also points to the broader consequences of bearing and nourishing offspring. References to landscapes collapsing, rivers drying up, and riverbeds cracking apart indicate what can happen when the very people the woman nourishes leave her side and extract not milk from their mother but water from rivers, trees from forests, and minerals from mountains: The poem depicts women’s bodies as enabling environmental degradation. Ch’oe Sŭngja’s “Kyōul e pada e kat-ōtda” (“Went to the Sea in Winter,” 1984) addresses the paradoxes of giving birth, a more rapid and dramatic emptying of the female body. The poem depicts a female corpse bearing children who scatter around the world, spreading disease and damaging ecosystems. For their part, writers such as Ishimure Michiko in *Paradise in the Sea of Sorrow* portray both suffering that stems from ecological devastation and responsibility for facilitating and remediating this suffering as transcending gender; gender divisions exist, but they frequently are superseded by the human/nonhuman dichotomy. Others, including Sakaki Nanao in “Haru wa akebono” (“Spring Dawn,” 1994), have gone so far as to depict “sexless” individuals with “no sign of gender” as destroying environments.

In these and other ways, creative work by both men and women has proposed understandings of gender that disrupt and at times overturn ecofeminist discourse. This literature demonstrates the importance not only of eschewing essentialist approaches, but also of

looking more closely at the nuances and ambiguities of discourse on environmental degradation writ large.

(POST)COLONIALISM

The increased attention to non-Western literatures is one of the most exciting new developments in environmental criticism. Scholarly interest in how creative texts from Africa, Latin America, and Asia discuss the environmental aspects of (post)colonialism has expanded particularly rapidly, quickened by the increasing interest of environmental and postcolonial literary critics in one another’s writings. Also important has been the growing tendency of literature scholars of all specialties to accept both the important position of non-Western literatures in world literature (texts that circulate beyond their culture of origin) and the need to offset conventional nation-centric approaches by focusing on transnational and global cultural flows.

Anticipated by historical scholarship including Alfred W. Crosby’s *Ecological Imperialism* (1986) and Richard H. Grove’s *Green Imperialism* (1995), the first significant cross-pollinations of environmental criticism and imperial discourse studies came with Alan Bewell’s *Romanticism and Colonial Disease* (1999) and Timothy Morton’s *The Poetics of Spice* (2000) (97–100). Bewell examined British medical and literary responses to “colonial disease,” understood as the global exchange of diseases that accompanied imperial expansion, whereas Morton explored the significance of spice and the spice trade to Romantic literature. Such studies were followed by two panoramic critical manifestoes that triggered an outpouring of postcolonial ecocriticism: Graham Huggan’s “‘Greening’ Postcolonialism” (2004) and Rob Nixon’s “Environmentalism and Postcolonialism” (2005) (67, 101). Discussing creative work by the Indian writer Arundhati Roy, South African J.M. Coetzee, and Canadian Barbara Gowdy, Huggan’s article argued that postcolonial criticism rectifies the relative culture blindness to which ecocriticism often falls prey,

whereas ecocriticism amends the anthropocentrism of much postcolonial thought. Nixon's essay calls for bringing environmentalism into closer dialogue with postcolonialism by relaxing tensions between postcolonial preoccupation with displacement and ecocritical preoccupation with an ethics of place, further urging scholars to examine comparatively works from around the world on such shared environmental issues as land rights, nuclear testing, pollution, and oil.

Recent ecocriticism scrutinizes more intensively the relationships between imperialism and ecological distress within the literatures not only of Europe and Anglo North America, but also of Africa, Asia, and Latin America. This increased attention to non-Western literature's engagement with both local ecological concerns and global environmental issues, including toxification, climate change, and environmental injustice, has focused on a wide array of creative landscapes on every continent. Significant general studies on postcolonial ecocriticism include *An Ecological and Postcolonial Study of Literature* by Robert P. Marzec (2007), *Postcolonial Ecocriticism* by Graham Huggan & Helen Tiffin (2010), and "Wilderness into Civilized Shapes" by Laura Wright (2010) (102–104). Marzec examines how creative texts by Anglophone writers as diverse as Daniel Defoe, Henry Fielding, E.M. Forster, D.H. Lawrence, and Salman Rushdie grapple with the ramifications of the enclosure movement, which brought about an initially British but ultimately worldwide top-down restructuring of people's relationships with the land that greatly impacted ecosystems on multiple continents. Casting their net even more broadly, Huggan & Tiffin (103) first survey panoramically the intersection of postcolonial and environmental matters in texts from India, Africa, the Caribbean, and the Pacific Islands, then they concentrate especially on how postcolonial creative works have problematized interactions between people and nonhuman animals. Wright's study of how literary artists from Africa, India, and Western nations represent the relationship between colonization

and environmental degradation likewise incorporates writing from several continents across the global south. Some postcolonial ecocritical monographs focus on individual regions, such as George Handley's *New World Poetics* (2007), which examines how writers from the Americas—the American poet Walt Whitman, the Chilean poet Pablo Neruda, and the Saint Lucian writer Derek Walcott—"discover and exploit the ideological flexibility of inherited human cultural patterns brought to bear in our relationship to nature, specifically, the Judeo-Christian myth of Adam in the Garden and its historic use to enable and justify environmental exploitation" (Reference 30, p. 4). Ecocritical studies focusing on Caribbean literature have also analyzed creative depictions of the complicated relationships among ecological devastation and (post)colonial trauma, myths of Edenic and natural origins, and cultural creolization (105, 106). Such scholarship has offered new perspectives on human/nonhuman dynamics in this and other parts of the world, revealing the challenges facing any number of rapidly globalizing societies. English-language Indian literature has also been read ecocritically, most notably in Upamanyu Pablo Mukherjee's *Postcolonial Environments* (2010) (107). Mukherjee focuses on contemporary English-language Indian fiction that discusses the subcontinent's environmental crises, including writings by Arundhati Roy, Amitav Ghosh, Indra Sinha, and Ruchir Joshi.

Amitav Ghosh's *The Hungry Tide* (2004) has been particularly popular with postcolonial ecocritics: Mukherjee (107) discusses the novel at length, the collection by Volkmann et al. (108) includes several essays on Ghosh, and Huggan & Tiffin (103) address it briefly. Set in the Sundarbans (in the Bay of Bengal), *The Hungry Tide* highlights the potentially catastrophic cost to people of prioritizing animals and the many ambiguities of human-nonhuman interactions. As Kanai (a Delhi businessman) comments to Piya (an American marine biologist of Indian descent), "These killings [of people by tigers] are never reported, never written about in the papers. And the reason is just that these

Indigeneity:

aboriginality or native-ness in recognition of analogies/affinities between the historical situations and cultural practices among “native” or “first people” worldwide

people are too poor to matter. We all know it, but we choose not to see it. Isn't that a horror too—that we can feel the suffering of an animal, but not of human beings. . . . It was people like you. . . . who made a push to protect the wildlife here, without regard for the human costs. And I'm complicit because people like me—Indians of my class, that is—have chosen to hide these costs, basically in order to curry favor with their Western patrons.” Huggan & Tiffin (103) observe that such conflicts have been discussed by both environmentalist and postcolonial critics who are “alert to the dilemmas involved in conserving endangered ecosystems and animals when the livelihoods of local (subaltern) peoples are simultaneously put at risk” (p. 185).

As postcolonial scholars become more familiar with ecocriticism, they are likely to explore in even greater depth the ecological subtexts of fiction such as the South African writer Zakes Mda's *The Heart of Redness* (2000). This novel probes the afterlives of the nineteenth-century Xhosa cattle killing and the high environmental costs of late-twentieth-century tourism in impoverished rural areas. Although residents of Qolorha (South Africa) have very different visions of their region's future—some call for a casino and water park and others are strongly opposed to such ventures for fear of obliterating local ecosystems—they eventually agree to promote tourism that “will not destroy indigenous forests, that will not bring hordes of people who will pollute the rivers and drive away the birds.” But just as they had wrongly believed that killing their cattle would lead to the return of their ancestors and the departure of European imperialists, the villagers now appear to underestimate the impact of this “holiday place” on the environment: The final pages of *Heart of Redness* reveal that what began as a backpackers' hostel has become a thriving holiday camp. Tourists are awed by the landscape, particularly the wild fig trees and the weaverbirds that call them home. Word has spread, demand for access is unrelenting, and construction shows no signs of ceasing (cf. Reference 108, p. 159).

Postcolonial ecocriticism has contributed significantly to the worlding of environmental

criticism. Other scholarship, including Lawrence Buell's *The Future of Environmental Criticism* (1) and Ursula K. Heise's *Sense of Place and Sense of Planet* (29), interweaves discussions of literatures from multiple cultures, regardless of their (post)colonial status. In the coming years, ecocriticism will need to diversify itself further by paying more heed to the literatures of societies that are neither Western nor former Western colonies. Most notable among these are the literatures of East Asia, as discussed in Karen Thornber's *Ecoambiguity* (2011) (109). Thornber spotlights East Asian creative portrayals of the relationship between damaged ecosystems and discrepancies among human attitudes, behaviors, and information vis-à-vis the natural world. To date, ecocritical journals in Japan, Korea, and other non-Western nations have focused largely on Western-language literatures, but this trend is slowly changing as the abundant East Asian and other non-Western-language texts on environmental degradation are beginning to be acknowledged.

INDIGENEITY

From its inception, ecocriticism has had a keen, if not always profound, interest in indigenous art and imagination, particularly that of North America. Two of the 25 contributions to *The Ecocriticism Reader* (1996) (17) were by Native American writer-critics, and the volume's “top fifteen” recommended additional readings include poet-ecocritic Gary Snyder's *The Practice of the Wild* (1990) (55), a bioregional manifesto that deems Native American cultural memory and expression crucial to the forging of a latter-day “natural contract” between humans and nonhumans necessary to stop the runaway destruction of Earth's resources.

This keen interest in indigeneity arose from the most fundamental world-historical concern that also gave rise to ecocriticism: disenchantment with the negative environmental consequences of industrial modernity. It is, therefore, unsurprising that ecocritics and other environmental humanists in disciplines ranging from anthropology to religious studies

should look with interest at the cultures of premodern peoples as offering alternative or supplementary recourses for reimagining Earth's environmental future. The engagement of eco-literary criticism with indigeneity or nativeness, however, has generally been a one-way affair, with enthusiasm often outrunning expertise and few Native scholars self-identifying as ecocritics, despite such scattered exceptions as Lakota scholar Thomas Gannon, whose *Sky-lark Meets Meadowlark* sensitively distinguishes British Romantic personification of birds from the greater receptivity within the Native American tradition to the idea of interspecies communication (110). In the movement's early years especially, as Greg Garrard notes, "many ecocritics" tended to cling rather uncritically to "the assumption of indigenous environmental virtue" (Reference 2, p. 120) as a corrective to runaway modernization, thus laying themselves open to the charge of perpetuating the myth of the "ecological Indian" (a term coined by anthropologist Shepard Krech III) (112).

However, ecocritics who have studied indigenous literature most searchingly have been, at least partly, immunized against such oversimplification given their grasp of indigenous cultures as sophisticated, complex, and evolving. For instance, while invoking indigenous cultural practice as an essential basis for the renewal of respect and reverence for the intertwining of culture and wild nature considered necessary for future planetary survival, Snyder (55) suggests that "primary peoples all know that their myths are somehow 'made up.' They do not take them literally and at the same time they hold the stories very dear" (p. 112). Conversely, indigenous culture-literate ecocritics have been among the most judicious critics of Krech's attempted demystification of traditional Native American hunting practices by imposing an anachronistic yardstick of contemporary ecological correctness (111–113), as in Annette Kolodny's analysis of the career of an embattled turn-of-the-twentieth century Penobscot writer whose history, she shows, makes no "claim to ecological sainthood" but nonetheless argues "for cultural traditions that

self-consciously promote ecological sanity" (Reference 113, p. 18).

Within ecocriticism's broad interest in works of indigenous environmental imagination, several specific concerns stand out. One is attentiveness to native artists' storytelling practices and underlying mythographies, recorded by such ethnographers as Keith Basso (114) and by such nature writers as Barry Lopez (115), who sympathetically reconstruct the dynamics of long-term collective attachment to specific locales. Ecocritics have been attracted to indigenous place-based stories and myths both for their own sake and for their potential adaptability as models for contemporary artistic and life practices, e.g., for their insights into the challenges of sustaining or restoring ecocultural identity notwithstanding the traumas of cultural change, displacement, and discrimination (50, 116). A second and related major concern pertains to the nondualistic recognition within "native" peoples' collective imagination of nonhuman entities as fellow beings, whether at a sensory or a spiritual level or both (55, 110) and for their cultivation of sensory awareness as an indispensable part of the human makeup (117). A third concern increasing in importance regards the way ecocritics have looked to indigenous art and thought for its testaments to multiple forms of environmental injustice and resistance, e.g., land grabs, exploitative labor practices, racist marginalization. Adamson's *American Indian Literature, Environmental Justice, and Ecocriticism* (2001) (50), an admirable work of narrative scholarship combining literary analysis with reflection on her pedagogical work with Native American students, marks the effective inception of this new wave.

Ecocritical work on the Native American imagination has tended so far to concentrate on a limited number of major figures from the "Native American Renaissance" of the 1960s onward, particularly N. Scott Momaday, Leslie Marmon Silko, Linda Hogan, Simon Ortiz, Joy Harjo, Louise Erdrich, and Gerald Vizenor. Given the desire to avoid the traditional settler-culture practice of homogeneous lumping of disparate native cultures as "Indians,"

discussion of indigeneity as such in this body of environmental criticism has tended to take a backseat to minute reconstruction of the ecocultural specificities of the tribal nation at issue. Yet, the subject has been at least residually present in environmental criticism from the start, in recognition both of important characteristic differences between settler and indigenous cultures and of Native American writers' acute consciousness of the composite nature of their literary work (interweaving, for example, indigenous traditions of oral narrative performance with Eurocentric novelistic genres) as well as their own ethno-racial makeup, which is also typically hybrid. One among many well-known examples is Laguna Pueblo writer Leslie Marmon Silko's *Ceremony*, a novel that intersperses poetic sequences drawing upon indigenous storytelling and ritual practice that also transfuse the main narrative.

Transnational scrutiny of the salience and complexities of indigeneity as a phenomenon in environmental literature has become more pronounced with the expansion of ecocritical analysis across national borders. Symptomatic examples include Alex Hunt's unpacking of the Chicano eco-mythic substructure of Rodolfo Anaya's novel *Bless Me Ultima* (118); Stuart Christie's comparative Canadian-U. S. examination of the imagination of native sovereignty (119); and Elizabeth DeLoughrey's searchingly complex analyses of the multilayered interweave of Polynesian and Europhone cultural memories in contemporary works of New Zealand literature (120), especially Samoan native Albert Wendt's Kafkaesque novel of the attempted insurgency of a nearly deracinated hybrid urban indigene, *Black Rainbow* (1987) (Reference 120, pp. 196–228).

In Wendt's work—and much the same can be said of other “native” writers—indigeneity has both an exoteric and an esoteric face, presenting itself both as a universally shared condition (e.g., remnant cultures threatened with extinction by the invaders) and as particularistic to the point of impenetrability by even a superintelligent uninitiate (e.g., *Black Rainbow*'s flight-and-pursuit plot transfused with fleeting

coded mythico-topographic allusions, or the quotient of untranslated, unglossed ecocultural phrases from the home language in this and many other Europhone texts by indigenous creative writers). One of the most difficult, yet also potentially most rewarding, challenges faced by environmental criticism has been and will continue to be the twin tasks of elucidating these arcana insofar as they can be elucidated while adjudicating the extent to which the literature in question seems to wish to conceal tribal secrets, environmental or otherwise. This veil of secrecy may be viewed as countering the bridge to a more expanded ecocultural understanding.

IMAGINING NONHUMANS: ECOCRITICISM AND ANIMAL STUDIES

Often intertwined with critical discussions of place, the figure of the animal has played an important role in its own right in ecocritical thought. Conservation efforts in Western societies have typically focused on the protection of habitats and species as two elements that symbolically stand in for the protection of nature at large (121), and “biophilia,” the sense of human connectedness to nonhuman living beings, has been cast by the biologist E.O. Wilson as one of the most basic human traits (122). Yet the figure of the animal in the environmental imagination is also associated, more than other tropes or symbols, with underlying tensions and stark contradictions: Animals are evolutionarily connected more closely to humans than other parts of nature, but they are also often represented as being separated from humans by a fundamental boundary. They invite reflection on humans' imbrication with ecosystemic networks, but the usual focus on charismatic mammals and birds also blocks understanding of ecosystems as a whole. Animals confront us in the contradictory shapes of the barely known and sometimes dangerous wild animal, on one hand, and of the domesticated animal that seems a product of culture as much as of nature, on the other hand. Furthermore, the relationship between people and animals is sometimes juxtaposed

with or metaphorically superimposed on social relations between unequal social groups, at the service of both progressive and reactionary political thought, and advocacy of animal rights is sometimes at odds with environmental thought in spite of considerable overlap.

Ecocriticism has, for a long time, found a rich territory for investigation in the abundant literature on animals in both Western and non-Western traditions, which often include an important environmental dimension even when their principal focus lies elsewhere. Large predator species have occupied the literary imagination most persistently. From the seafaring and fishing narratives of Herman Melville's *Moby-Dick* and Ernest Hemingway's *The Old Man and the Sea* to the fiction and poetry of Ernest Thompson Seton, Jack London, Rudyard Kipling, William Faulkner, Robinson Jeffers, Gary Snyder, Julia Leigh, Jiang Rong (Lü Jiamin), and Guo Xuebo, writers have foregrounded encounters with whales, wolves, and bears in particular as scenes where nature and culture come face to face and masculine as well as national identities are put to the test in the search for some combination of human dominance over and coexistence with other species (26, 123, 124). In the Latin American "romance de la selva," which typically seeks to articulate Latin America's particular place in the story of modernization, encounters with animals tend to form part of a complex encounter between indigenous traditions, which are associated with the jungle, and European-derived ones, which are associated with the city, as the protagonist travels from the metropolis to the jungle and back (125, 126). In much of this literature from the Americas and beyond, affirmations of the absolute Otherness of the animal alternate with descriptions of temporary human-animal fusions focusing on body or mind. In the works of such Native American writers as Silko and Vizenor, these fusions tend to take on a different meaning, as the focus is not mainly on individual immersions into the wild, but on initiations into a communally lived connectedness with nature and the cultural traditions on which it relies (19, 127).

Beyond human-animal encounters, environmentally oriented scholars of culture have focused on the ways in which the history and present condition of animals and humans have been intertwined. Snyder (55) and Paul Shepard (128) have argued at some length that humans are essentially animals and remain "wild" in some of their basic characteristics, whereas Donna Haraway (129, 130) and Gary Nabhan (131) have highlighted some of the consequences of domestication. Haraway, in her seminal, if narrowly focused, *The Companion Species Manifesto* and *When Species Meet*, has argued that a recognition of how humans are coconstituted by animals with whom they live—mostly pet animals, in her discussion—opens up a posthumanist perspective on humans as one species among others rather than one with special privileges (129, 130). For some of her argument, Haraway relies on the work of literary scholar Cary Wolfe, who has claimed even more broadly that the willingness to make a fundamental distinction between humans and animals is constitutive of basic inequalities between humans, given that many forms of oppression are at least implicitly based on the assumption that the oppressed are animals rather than humans (132). As one ecofeminist critic has pointed out, environmental writing is not exempt from such conceptual conflation: "For most 'white' male writers, dark-skinned people and women are inevitably close to animals, associated with matter, body, and ultimately the degradation of undifferentiated merging with nature" (Reference 133, p. 151). But Haraway has also been attacked for focusing on pet dogs rather than on factory farming, a much more violent form of contemporary humans' connection with animals that raises urgent questions not only about animal ethics, but also about environmental impacts, given the significant contribution of animal farming to pollution and climate change.

These issues have given rise to a lively debate regarding the interrelation of animal domestication, dietary habits, and ecosystemic change that has been pursued by writers, journalists, activists, and literary scholars including, for

Posthumanism:

in anthropology, philosophy, and literary and cultural studies, the attempt to question the systematic privileging of the human species above others

example, Carol Adams, Ruth Ozeki, Michael Pollan, and Jonathan Safran Foer. But the controversy over whether omnivorous, vegetarian, or locavore diets are best suited for sustainability has also exposed fundamental differences between animal studies scholars and ecocritics. Both areas of study explore ways in which humans' detrimental impact on other species may be diminished. However, whereas animal studies scholars tend to focus on the direct violence humans perpetrate on species taxonomically closely related to them, mostly mammals and birds, ecocritics highlight the ways in which human societies systemically, even if unintentionally, damage habitats and species ranging from microorganisms and plants to insects and amphibians. Whereas animal studies scholars usually find any direct violence inflicted on animals unacceptable, environmentalists and ecocritics sometimes accept such violence in the interest of ensuring the survival of crucial ecosystems.

Such debates range far beyond literature narrowly conceived, yet they often crystallize around central questions of representation—most importantly, that of anthropomorphism. In seeking to foster biocentric forms of imagination through verbal art, ecocritics have often struggled with the problem of whether the use of human language introduces an anthropocentric slant that even the biocentric contents of a literary work cannot hope to overcome. Yet, even though literary creations remain fundamentally human, works such as the brilliant trilogy about ants by the French novelist Bernard Werber, *Les fourmis*, *Le jour des fourmis*, and *La révolution des fourmis* show that the literary imagination can go far toward envisioning how the world presents itself to beings relying mostly on smell and touch rather than vision and sound, and thereby to relativize the human perspective as one among many.

Poetic and storytelling traditions around the world have tended to focus not so much on animals' difference as on their similarity to humans by featuring animals—and sometimes, plants—that possess the gift of language. Trickster figures such as coyotes or rabbits often occupy such a position on the border between

human and animal. In the Western tradition, the figure of the speaking animal appears across a range of high literary genres from ancient myth to stories of metamorphosis and in animal fables from Aesop to Jean de la Fontaine. From the eighteenth century onward, as Christopher Manes has shown, nature is increasingly conceived as silent, and the speaking animal migrates downward to literature intended for children and popular entertainment (Reference 17, pp. 15–29). In the twentieth century, this trope became a staple of cartoons and comic strips, but modernist literature reintroduced the speaking animal into serious literary works [for example in Franz Kafka's "Ein Bericht für eine Akademie" ("Report to an Academy," 1917)] as a way of questioning Enlightenment ideas about the exceptional ontological status of humans. In addition, science fiction of recent decades has populated futuristic worlds with intelligent and linguistically gifted animals, which are often the product of humans' genetic experimentations. Not only does nature once again speak back to humans in, for example, Sheri Tepper's *The Family Tree* (1997), Dietmar Dath's *Die Abschaffung der Arten* (*The Decommissioning of Species*, 2008) and Laurence Gonzales's *Lucy* (2010), but true humanity and ecologically sustainable ways of life come to realize themselves through human-animal hybrids or humanoid animals.

Recent work both on animated films from Disney's *Bambi* to Miyazaki's *Princess Mononoke*, which constitute one of the most influential art forms in shaping public perceptions of nature and animals in the twentieth century, and on nature documentaries with their sometimes anthropomorphizing tendencies has highlighted the ambivalent role of anthropomorphic animals: These animals are portrayed not only as distortions of a genuinely environmental perception, but also as powerful attractors to the realm of the nonhuman (134–136). As the ethologist Frans de Waal has noted, "To endow animals with human emotions has long been a scientific taboo. But if we do not, we risk missing something fundamental, about both animals and us"—an observation that applies to literary

approaches to the animal and increasingly to scientific research (137).

CONCLUSION

Ecocriticism started as an organized movement within literature studies in the early 1990s, a scholarly generation later than the first such movements within the environmental humanities (in history, ethics, and theology). Ecocriticism as a Library of Congress subject heading dates from 2002 (Reference 138, p. 7). Its progress has been rapid, such that within two decades it is well on the way to extending itself worldwide from its original Anglo-American base and now boasts a half-dozen scholarly journals in Europe, North America, and Asia in addition to ASLE's flagship journal, *ISLE*. Yet ecocriticism remains more in a state of unfolding than of consolidation. Issues of methodology and proper future course remain matters of debate, as confirmed, for example, by the ongoing dispute as to the proper relation between scientific and aesthetic methods of inquiry and the comparative recency of attention being accorded to non-Western literatures. Although

the relatively swift interest taken by film studies in ecocriticism (References 133–136, 139–141) may suggest that literature-environment studies would exert a broad ripple effect across criticism of other expressive genres, in the fields of visual art and music this cross-fertilization is still in its very early stages (References 142–144). Also uncertain is whether future ecocritical study of expressive media will at some point be explored in a coordinated, collaborative way rather than by different groups of specialists operating more or less autonomously. Regardless of whether ecocriticism's future is to move toward tighter consensus about questions of purpose and method or to remain a more loosely networked congeries of initiatives and provocations, the radiant intellectual energies the movement has demonstrated during its start-up phase have not only succeeded in placing “the environment” on the table as a pressing priority for literature studies per se, but also generated a number of specific critical approaches that offer the promise of a deeper, more nuanced grasp of environmental issues both within and beyond the environmental humanities.

SUMMARY POINTS

1. Ecocriticism has developed into an increasingly worldwide movement in two main waves or stages: the first marked by a commitment to preservationist environmentalism, an ecocentric environmental ethics, an emphasis on place-attachment at a local or bioregional level, a prioritization of the self-nature relation, and forms of literary imagination that especially reflect these; the second marked by a more sociocentric environmental ethics attaching special importance to issues of environmental (in)justice, to collective rather than individual experience as a primary historical force and concern in works of imagination, and (increasingly) to the claims of a global or planetary level of environmental belonging. Throughout these shifts, however, a number of concerns have remained constant.
2. Accompanying and influencing the trajectory just described has been a diversification of ecocritical interest from its original concentration on Anglo-American romantic literature to include indigenous and other minority cultures (first in North America and then elsewhere) and in non-Western (post)colonial and other literatures worldwide.
3. Interest in the possibility of alliances between scientific and humanistic methods of inquiry was crucial in catalyzing ecocriticism and has continued to run strong, although it has also been sharply criticized, especially by those who view institutionalized “science” as contributing to today's environmental problems.

4. Ecocritics initially privileged modes of literary representation that were or could be understood as more or less realistic reflections of the natural world. Over the past decade, this privileging of realism has come into question, not only because realist texts make up only part of the overall literary canon, but also because ecological realities, in their complexity and invisibility, often challenge the very strategies of writing that have come to be accepted as realist, especially in the Western tradition, and seem to call for more experimental modes of representation.
5. A keen interest in differential experience and perception of environment according to gender has also been both an ongoing and controversial influence, with central attention recently shifting somewhat from an ecofeminist focus on representations of women's historic/symbolic role as caregivers and/or casualties of patriarchal domination to an interrogation of heteronormativity in the nonhuman biological world and in the imagination of humans in relation to it.
6. Ecocriticism shares with critical animal studies an interest in redefining humans' relationships to other species.² But whereas animal studies have privileged the social, cognitive, and emotive abilities of higher animals and humans' consciously perpetrated violence against them, ecocritics have tended to focus on systemic and often unintentional damages to other species, including a wide range of both animals and plants. These two approaches converge in some cases, but they conflict in those where ecocritics accept violence to individual animals or species in the interest of maintaining ecosystem functioning.

FUTURE ISSUES

1. As ecocriticism continues to spread worldwide, the need for comparative and coordinated study of different bodies of literature and scholarship will increase. This must mean further exploration both of (post)colonial non-Western literature and literature of societies neither Western nor ever colonized by Western powers.
2. Ecocriticism, to date, remains disproportionately nation focused, and disproportionately concentrated on Anglophone literatures. In the future, more emphasis must be placed on analysis of affinities across cultures and planetary-scale tendencies as well as against cultural specificity or uniqueness.
3. Ecocriticism will also need to work (even) harder to distribute attention comprehensively and proportionately across expressive forms, both within literature—continuing to compensate for its initial overemphasis on “realistic” genres—and in other expressive media, perhaps especially art, music, and other modes of artistic performance.
4. Just as second-wave sociocentric ecocriticism took issue with the first-wave prioritization of nature protection, so too in the future ecocriticism will need to remain responsive to the changing face of environmentalism: to confront more seriously than it has to

²Critical animal studies is an interdisciplinary area of research analyzing and criticizing current conceptual boundaries between humans and animals and redefining this relationship and its associated ethics in terms first developed by advocates of animal liberation and by poststructuralist philosophers.

date the implications of such recently emergent concerns as climate change issues as well as unforeseen future crises. Ecocriticism's increased responsiveness in recent years to changes inside and outside the discipline is a promising model of how this area may adapt to rapidly changing environmentalist approaches in years to come.

5. As ecocriticism continues to monitor and selectively assimilate breakthroughs across the whole range of environmental sciences and social sciences, it must be (even) more assertive than heretofore in pressing the case for the importance of the qualitative thinking practiced by environmental humanists as indispensable to the understanding and remediation of environmental crises and dilemmas of whatever sort.
6. Although ecocriticism has successfully examined such forms as pastoral and apocalyptic narratives that address the state of the natural world, it has, to date, less intensively engaged with literary forms that tend not to engage with the natural world thematically, especially the highly experimental forms that have developed over the course of the twentieth and early twenty-first centuries. The question of how an environmentalist perspective may speak to the issue of aesthetic form and its functions will need to be answered more broadly before ecocriticism can command the attention of literary scholars not primarily concerned with environmentalism.
7. Ecocriticism has not yet engaged to any significant degree with new spatial and digital models of analyses that are emerging in other areas of literary and cultural studies. However, given ecocritics' interest in place, space, and the relationship between local, regional, national, and global modes of thought and activism, new modeling and visualization techniques for complex ecological as well as cultural processes stand to play a significant role in the future development of the field. In its turn, ecocriticism has the potential to make an important contribution to the new combinations of qualitative and quantitative methods of analysis that are currently being explored in the humanities.
8. A great deal of ecocritical work has shown the predominance of declensionist narratives in environmentalist thought and literature. It is currently less clear which story templates environmentalist writing may draw on for a more optimistic, perhaps even utopian, vision of the environmental future. Ecocriticism should play an important role not only in analyzing existing environmental literature, but also in imagining the outlines of different and more positive and future-oriented ways of thinking and writing for environmentalism.

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SCHOLARLY LITERATURE CITED

1. Buell L. 2005. *The Future of Environmental Criticism*. Oxford: Blackwell. 195 pp.
2. Garrard G. 2004. *Ecocriticism*. London: Routledge. 203 pp.
3. Meeker J. 1972. *The Comedy of Survival: Studies in Literary Ecology*. New York: Scribner's. 133 pp.
4. Ruecker W. 1978. Literature and ecology: an experiment in ecocriticism. *Iowa Rev.* 9.1:71–86
5. Marx L. 1964. *The Machine in the Garden*. New York: Oxford Univ. Press. 392 pp.
6. Williams R. 1973. *The Country and the City*. London: Chatto & Windus. 335 pp.
7. Gifford T. 1999. *Pastoral*. London: Routledge. 186 pp.
8. Buell L. 1995. *The Environmental Imagination*. Cambridge, MA: Harvard Univ. Press. 586 pp.
9. Bate J. 1991. *Romantic Ecology: Wordsworth and the Environmental Tradition*. London: Routledge. 131 pp.
10. Kroeber K. 1994. *Ecological Literary Criticism: Romantic Imagining and the Biology of Mind*. New York: Columbia Univ. Press. 185 pp.
11. Oerlemans O. 2002. *Romanticism and the Materiality of Nature*. Toronto: Toronto: Univ. Toronto Press. 253 pp.
12. Elder J. 1985. *Imagining the Earth: Poetry and the Vision of Nature*. Athens, GA: Univ. Ga. Press. 246 pp. 2nd ed.
13. Gifford T. 1995. *Green Voices: Understanding Contemporary Nature Poetry*. Manchester: Manchester Univ. Press. 198 pp.
14. McCusick J. 2000. *Green Writing: Romanticism and Ecology*. New York: St. Martin's. 261 pp.
15. Fritzell P. 1990. *Nature Writing and America: Essays upon a Cultural Type*. Ames: Iowa State Univ. Press. 354 pp.
16. Slovic S. 1992. *Seeking Awareness in American Nature Writing*. Salt Lake City: Univ. Utah Press. 203 pp.
17. Glotfelty C, Fromm H, eds. 1996. *The Ecocriticism Reader*. Athens, GA: Univ. Ga. Press. 415 pp.
18. Coupe L, ed. 2000. *The Green Studies Reader*. London: Routledge. 315 pp.
19. Adamson J, Evans MM, Stein R, eds. 2002. *The Environmental Justice Reader*. Tucson: Univ. Ariz. Press. 395 pp.
20. Naess A. 1973. The shallow and the deep, long-range ecology movement. *Inquiry* 16:95–100
21. Harrison R. 1993. *Forests: The Shadow of Civilization*. Chicago: Univ. Chicago Press. 288 pp.
22. Westling L. 1999. Virginia Woolf and the flesh of the world. *New Literary Hist.* 30:855–76
23. Bate J. 2000. *The Song of the Earth*. Cambridge, MA: Harvard Univ. Press. 336 pp.
24. Bennett M, Teague D, eds. 1999. *The Nature of Cities*. Tucson: Univ. Ariz. Press. 311 pp.
25. Dixon T, ed. 2002. *City Wilds*. Athens, GA: Univ. Ga. Press. 311 pp.
26. Buell L. 2001. *Writing for an Endangered World*. Cambridge, MA: Harvard Univ. Press. 365 pp.
27. Morton T. 2007. *Ecology without Nature*. Cambridge, MA: Harvard Univ. Press. 249 pp.
28. Morton T. 2010. *The Ecological Thought*. Cambridge, MA: Harvard Univ. Press. 163 pp.
29. Heise U. 2008. *Sense of Place and Sense of Planet: The Environmental Imagination of the Global*. New York: Oxford Univ. Press. 250 pp.
30. Handley G. 2007. *New World Poetics*. Athens, GA: Univ. Ga. Press. 442 pp.
31. Mayer S, ed. 2003. *Restoring the Connection to the Natural World: Essays on the African American Environmental Imagination*. Hamburg: LIT. 198 pp.
32. Outka P. 2008. *Race and Nature from Transcendentalism to the Harlem Renaissance*. New York: Palgrave-Macmillan. 266 pp.
33. Finseth I. 2009. *Shades of Green: Visions of Place in the Literature of American Slavery*. Athens, GA: Univ. Ga. Press. 348 pp.
34. Ruffin K. 2010. *Black on Earth: African American Ecoliterary Traditions*. Athens, GA: Univ. Ga. Press. 212 pp.
35. Siewers A. 2009. *Strange Beauty: Ecocritical Approaches to Early Medieval Landscape*. New York: Palgrave-Macmillan. 224 pp.
36. Rudd G. 2007. *Greenery: Ecocritical Readings of Late Medieval Literature*. Manchester: Manchester Univ. Press. 221 pp.
37. Watson R. 2006. *Back to Nature: The Green and the Real in the Late Renaissance*. Philadelphia: Univ. Penn. Press. 436 pp.

38. McColley D. 2007. *Poetry and Ecology in the Age of Milton and Marvell*. Aldershot, UK: Ashgate. 252 pp.
39. Killingsworth MJ, Palmer J, eds. 1992. *Ecospeak: Rhetoric and Environmental Politics in America*. Carbondale: S. Illinois Univ. Press. 312 pp.
40. Herndl C, Brown C, eds. 1996. *Green Culture: Environmental Rhetoric in Contemporary America*. Madison: Univ. Wisc. Press. 315 pp.
41. DeLuca K. 1999. *Image Politics: The New Rhetoric of Environmental Activism*. New York: Guilford. 203 pp.
42. Buell F. 2003. *From Apocalypse to Way of Life: Environmental Crisis in the American Century*. London: Routledge. 390 pp.
43. Kosek J. 2006. *Understories: The Political Life of Forests in Northern New Mexico*. Durham, NC: Duke Univ. Press. 380 pp.
44. Dobrin S, Kidd K, eds. 2004. *Wild Things: Children's Literature and Ecocriticism*. Detroit, MI: Wayne State Univ. Press. 308 pp.
45. Moore B. 2008. *Ecology and Literature: Ecocentric Personification from Antiquity to the Twenty-First Century*. New York: Palgrave-Macmillan. 247 pp.
46. Fletcher A. 2004. *A New Theory for American Poetry*. Cambridge, MA: Harvard Univ. Press. 316 pp.
47. Fuchs E, Chaudhuri U, eds. 2002. *Land/Scape/Theater*. Ann Arbor: Univ. Mich. Press. 390 pp.
48. Slovic S. 1994. *Ecocriticism, storytelling, values, communication, contact*. http://www.asle.umn.edu/conf/other_conf/wla/1994/slovic.html
49. Marshall I. 2003. *Peak Experiences: Walking Meditations on Literature, Nation, and Need*. Charlottesville: Univ. Press Va. 267 pp.
50. Adamson J. 2001. *American Indian Literature, Environmental Justice, and Ecocriticism: The Middle Place*. Tucson: Univ. Ariz. Press. 213 pp.
51. Phillips D. 2003. *The Truth of Ecology: Nature, Culture, and Literature in America*. New York: Oxford Univ. Press. 300 pp.
52. Alaimo S. 2010. *Bodily Natures: Science, Environment, and the Material Self*. Bloomington: Indiana Univ. Press. 193 pp.
53. Berry W. 1977. *The Unsettling of America*. San Francisco, CA: Sierra Club. 228 pp.
54. Berry W. 1983. *Standing by Words*. San Francisco, CA: North Point. 213 pp.
55. Snyder G. 1990. *The Practice of the Wild*. San Francisco, CA: North Point. 190 pp.
56. Snyder G. 1995. *A Place in Space*. Washington, DC: Counterpoint. 263 pp.
57. McGinnis M, ed. 1999. *Bioregionalism*. London: Routledge. 231 pp.
58. Peck H. 1990. *Thoreau's Morning Work*. New Haven: Yale Univ. Press. 194 pp.
59. Elder J. 1998. *Reading the Mountains of Home*. Cambridge, MA: Harvard Univ. Press. 253 pp.
60. Holmes S. 1999. *The Young John Muir: An Environmental Biography*. Madison: Univ. Wisc. Press. 309 pp.
61. Kerridge R. 2001. Ecological Hardy. In *Beyond Nature Writing: Expanding the Boundaries of Ecocriticism*, ed. K Armbruster, KR Wallace, pp. 126–42. Charlottesville: Univ. Press Va.
62. Tallmadge J. 2004. *The Cincinnati Arch: Learning from Nature in the City*. Athens, GA: Univ. Ga. Press. 226 pp.
63. Peña DG. 2002. Endangered landscapes and disappearing peoples? Identity, place, and community in ecological politics. See Ref. 19, pp. 58–81
64. Comfort S. 2002. Struggle in Ogoniland: Ken Saro-Wiwa and the cultural politics of environmental justice. See Ref. 19, pp. 229–46
65. Thomashow M. 2004. *Bringing the Biosphere Home: Learning to Perceive Global Environmental Change*. Cambridge, MA: MIT Press. 244 pp.
66. Beck U. 1999. *World Risk Society*. Cambridge, UK: Polity Press. 184 pp.
67. Nixon R. 2005. Environmentalism and postcolonialism. In *Postcolonial Studies and Beyond*, ed. A Loomba, S Kaul, M Bunzl, A Burton, J Esty, pp. 233–51. Durham, NC: Duke Univ. Press
68. O'Brien S. 2001. Articulating a world of difference: ecocriticism, postcolonialism and globalization. *Can. Lit.* 170–71:140–58
69. Carroll J. 2004. *Literary Darwinism: Evolution, Human Nature, and Literature*. New York: Routledge. 276 pp.

70. Love G. 2003. *Practical Ecocriticism: Literature, Biology, and the Environment*. Charlottesville: Univ. Press Va. 212 pp.
71. Boyd B. 2009. *On the Origin of Stories: Evolution, Cognition, and Fiction*. Cambridge, MA: Harvard Univ. Press. 640 pp.
72. Gottschall J, Wilson D, eds. 2005. *The Literary Animal: Evolution and the Nature of Narrative*. Evanston, IL: Northwestern Univ. Press. 304 pp.
73. Sugiyama M. 2001. Narrative theory and function: why evolution matters. *Philos. Lit.* 25:233–50
74. Bryson S, ed. 2002. *Ecopoetry: A Critical Introduction*. Salt Lake City: Univ. Utah Press. 272 pp.
75. Scigaj L. 1999. *Sustainable Poetry: Four American Ecopoets*. Lexington: Univ. Press Kentucky. 311 pp.
76. Cohen M. 2004. Blues in the green: ecocriticism under critique. *Environ. Hist.* 9:9–36
77. Worster D. 1994. *Nature's Economy: A History of Ecological Ideas*. Cambridge, UK: Cambridge Univ. Press. 505 pp. 2nd ed.
78. White R. 1990. Environmental history, ecology, and meaning. *J. Am. Hist.* 76:1111–16
79. Sandilands C. 1999. *The Good-Natured Feminist: Ecofeminism and the Quest for Democracy*. Minneapolis: Univ. Minn. Press. 244 pp.
80. Mortimer-Sandilands C, Erickson B, eds. 2010. *Sex, Nature, Politics, Desire*. Bloomington: Univ. Indiana Press. 410 pp.
81. Takacs D. 1996. *The Idea of Biodiversity: Philosophies of Paradise*. Baltimore, MD: Johns Hopkins Univ. Press. 393 pp.
82. Deitering C. 1996. The postnatural novel: toxic consciousness in fiction of the 1980s. See Ref. 17, pp. 196–203
83. Waddell C, ed. 2000. *And No Birds Sing: Rhetorical Analyses of Rachel Carson's Silent Spring*. Carbondale: S. Illinois Univ. Press. 232 pp.
84. Page T. 2008. *The problem of the land is the problem of the woman: a genealogy of ecofeminism at Grailville*. PhD thesis. Harvard Univ., Cambridge, MA. 321 pp.
85. Rosser S, ed. 2008. *Women, Science, and Myth: Gender Beliefs from Antiquity to the Present*. Santa Barbara, CA: ABC-CLIO. 502 pp.
86. Merchant C. 1995. *Earthcare: Women and the Environment*. New York: Routledge. 280 pp.
87. Salleh A. 1989. Stirrings of a new renaissance. *Island* 38:26–31
88. Hay P. 2002. *Main Currents in Western Environmental Thought*. Bloomington: Indiana Univ. Press. 400 pp.
89. Wall D, ed. 1994. *Green History: A Reader in Environmental Literature, Philosophy and Politics*. London: Routledge. 273 pp.
90. Gaard G, Murphy PD. 1998. Introduction. In *Ecofeminist Literary Criticism: Theory, Interpretation, Pedagogy*, ed. G Gaard, P Murphy, pp. 1–13. Urbana: Univ. Illinois Press
91. Ortner S. 1974. Is female to male as nature is to culture? In *Woman, Culture, and Society*, ed. M Rosaldo, L Lamphere, pp. 68–87. Stanford, CA: Stanford Univ. Press
92. Spretnak C. 1989. Towards an ecofeminist spirituality. In *Healing the Wounds: The Promise of Ecofeminism*, ed. J Plant, pp. 127–52. London: Green Print
93. Alaimo S. 2000. *Undomesticated Ground: Recasting Nature as Feminist Space*. Ithaca, NY: Cornell Univ. Press. 225 pp.
94. Mellor M. 2009. Ecofeminist political economy and the politics of money. In *Eco-Sufficiency and Global Justice*, ed. A Salleh, pp. 251–69. New York: Pluto
95. Quartarone L. 2002. Pietas, furor, and ecofeminism in the *Aeneid*. In *Approaches to Teaching Vergil's Aeneid*, ed. W Anderson, L Quartone, pp. 147–58. New York: Modern Lang. Assoc. Am.
96. Kolodny A. *The Land Before Her: Fantasy and Experience of the American Frontiers, 1630–1860*. Chapel Hill: Univ. N. Carolina Press. 293 pp.
97. Crosby A. 1986. *Ecological Imperialism: Biological Expansion of Europe, 900–1900*. Cambridge, UK: Cambridge Univ. Press. 368 pp.
98. Grove R. 1995. *Green Imperialism: Colonial Expansion, Tropical Island Edens, and the Origins of Environmentalism, 1600–1860*. New York: Cambridge Univ. Press. 540 pp.
99. Bewell A. 1999. *Romanticism and Colonial Disease*. Baltimore, MD: Johns Hopkins Univ. Press. 373 pp.

100. Morton T. 2000. *The Poetics of Spice: Romantic Consumerism and the Exotic*. Cambridge, UK: Cambridge Univ. Press. 282 pp.
101. Huggan G. 2004. "Greening" postcolonialism: ecocritical perspectives. *Modern Fiction Stud.* 50:701–33
102. Marzec RP. 2007. *An Ecological and Postcolonial Study of Literature: From Daniel Defoe to Salman Rushdie*. New York: Palgrave-Macmillan. 200 pp.
103. Huggan G, Tiffin H. 2010. *Postcolonial Ecocriticism: Literature, Animals, Environment*. London: Routledge. 245 pp.
104. Wright L. 2010. *"Wilderness into Civilized Shapes": Reading the Postcolonial Environment*. Athens: Univ. Ga. Press. 213 pp.
105. DeLoughrey E, Gosson R, Handley G., eds. 2005. *Caribbean Literature and the Environment: Between Nature and Culture*. Charlottesville: Univ. Press Va. 303 pp.
106. Campbell C, Somerville E. eds. 2007. *"What is the Earthly Paradise?" Ecocritical Responses to the Caribbean*. Newcastle, UK: Cambridge Schol. Publ. 173 pp.
107. Mukherjee U. 2010. *Postcolonial Environments: Nature, Culture, and the Contemporary Indian Novel in English*. London: Palgrave-Macmillan. 203 pp.
108. Volkmann L, Grimm N, Detmers I, Thomson K, eds. 2010. *Local Natures, Global Responsibilities: Ecocritical Perspectives on the New English Literatures*. Amsterdam: Rodopi. 370 pp.
109. Thornber K. 2011. *Ecoambiguity: Environmental Crises and East Asian Literatures*. Ann Arbor: Univ. Mich. Press. In press
110. Gannon T. 2009 *Skylark Meets Meadowlark*. Lincoln: Univ. Nebraska Press. 416 pp.
111. Krech S. III. 1996 *The Ecological Indian: Myth and History*. New York: Norton. 318 pp.
112. Kolodny A. 2007. Rethinking the "ecological Indian": a Penobscot precursor. *ISLE* 14:1–24
113. Schweninger L. 2008. *Listening to the Land: Native American Literary Responses to the Landscape*. Athens, GA: Univ. Georgia Press. 242 pp.
114. Basso K. 1996. *Wisdom Sits in Places: Landscape and Language among the Western Apache*. Albuquerque: Univ. New Mexico Press. 171 pp.
115. Lopez B. 1989. *Crossing Open Ground*. New York: Vintage. 208 pp.
116. Dreese D. 2002. *Ecocriticism: Creating Self and Place in Environmental and American Indian Literatures*. New York: Lang. 131 pp.
117. Abram D. 1996. *The Spell of the Sensuous*. New York: Pantheon. 326 pp.
118. Hunt A. 2005. In search of Anaya's carp: mapping ecological consciousness and Chicano myth. *ISLE* 12:179–206
119. Christie S. 2009. *Plural Sovereignties and Contemporary Indigenous Literature*. New York: Palgrave-Macmillan. 280 pp.
120. DeLoughrey E. 2007. *Routes and Roots: Navigating Caribbean and Pacific Island Literatures*. Honolulu: Univ. Hawai'i Press. 334 pp.
121. Adams W. 2004. *Against Extinction: The Story of Conservation*. London: Earthscan. 311 pp.
122. Wilson EO. 1984. *Biophilia*. Cambridge, MA: Harvard Univ. Press. 157 pp.
123. Shepard P, Sanders B. 1985. *The Sacred Paw: The Bear in Nature, Myth, and Literature*. New York: Viking. 243 pp.
124. Highfield J. 2006. Suckling from the crocodile's tit: wildlife and nation formation in Australian narratives. *Antipodes N. Am. J. Aust. Lit.* 20:127–40
125. Marcone J. 1998. De retorno a lo natural: la serpiente de oro, la "novela de la selva" y la crítica ecológica. *Hispania* 81:299–308
126. Marcone J. 2000. Jungle fever: Primitivism in environmentalism: Rómulo Gallegos's *Canaima* and the romance of the jungle. In *Primitivism and Identity in Latin America: Essays on Art, Literature, and Culture*, ed. E Camayd-Freixas, J González, pp. 157–72. Tucson: Univ. Ariz. Press
127. Biedler P. 2002. Animals and theme in *Ceremony*. In *Leslie Marmon Silko's Ceremony: A Casebook*, ed. A Chavkin, pp. 17–22. Oxford: Oxford Univ. Press
128. Shepard P. 1996. *The Others: How Animals Made Us Human*. Washington, DC: Island. 374 pp.
129. Haraway D. 2003. *The Companion Species Manifesto: Dogs, People, and Significant Otherness*. Chicago: Prickly Paradigm. 100 pp.

130. Haraway D. 2008. *When Species Meet*. Minneapolis: Univ. Minn. Press. 423 pp.
131. Nabhan G. 2004. *Why Some Like It Hot: Food, Genes, and Cultural Diversity*. Washington, DC: Island. 233 pp.
132. Wolfe C. 2003. *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory*. Chicago: Univ. Chicago Press. 237 pp.
133. Westling L. 1996. *The Green Breast of the New World: Landscape, Gender, and American Fiction*. Athens: Univ. Ga. Press. 211 pp.
134. Armbruster K. 2004. Creating the world we must save: the paradox of television nature documentaries. In *Writing the Environment*, ed. R Kerridge, N Sammells, pp. 218–38. London: Zed
135. Mitman G. 1999. *Reel Nature: America's Romance with Wildlife on Film*. Cambridge, MA: Harvard Univ. Press. 263 pp.
136. Whitley D. 2008. *The Idea of Nature in Disney Animation*. Aldershot, UK: Ashgate. 154 pp.
137. De Waal F. 1997. Are we in anthropodenial? *Discover* 18:50–53
138. Johnson L. 2009. Greening the library: the fundamentals and future of ecocriticism. *Choice* Dec.: 7–13
139. Hochman J. 1998. *Green Cultural Studies: Nature in Film, Novel, and Theory*. Moscow, ID: Univ. Idaho Press. 234 pp.
140. Ingram D. 2000. *Green Screen: Environmentalism and Hollywood Cinema*. Exeter: Univ. Exeter Press. 206 pp.
141. Murray R, Heumann J, eds. 2009. *Ecology and Popular Film*. Albany: State Univ. NY Press. 228 pp.
142. Braddock A, Irmischer C, eds. 2009. *A Keener Perception: Ecocritical Studies in American Art History*. Tuscaloosa: Univ. Ala. Press. 298 pp.
143. Rothenberg D. 2002. *Sudden Music: Improvisation, Sound, Nature*. Atlanta: Univ. Ga. Press. 214 pp.
144. Dunaway F. 2003. *Natural Visions: The Power of Images in American Environmental Reform*. Chicago: Univ. Chicago Press. 246 pp.