For as long as humans have been recording images of the world around them, they have been wondering about its meaning and their own status. Paleolithic caves in the Dordogne are filled with luminous paintings and carvings of aurochs, horses, mammoths, ibex, salmon, snakes, and flowering and seeding plants. Only occasionally does a small human figure appear, often with the head of a stag or in crude stick form. Tribal cultures around the world have long oral traditions in which humans belong to the whole community of living creatures and share responsibility for ethical behavior within it. But radical changes to those ancient traditions came with domestication of plants and animals and with the settled hierarchical civilizations that began to separate themselves from the rest of the natural world. Four thousand years ago Sumerian King Gilgamesh gazed over the wall of his city and saw a corpse floating in the river, lamenting, “I too shall become like that, just so shall I be.”¹ His answer to the fear of mortality was to attack nature by destroying the sacred cedar forest of the gods, with tragic consequences in his epic story. That disastrous impulse born of the will to master nature was only the beginning, as landscapes on every continent were forcibly turned to human purposes by advancing technologies and burgeoning populations, which have now brought us to what many fear is the brink of global ecological collapse. In The Country and the City, Raymond Williams surveys the often escapist English literary responses to these changes from the landscape enclosures of the Early Modern period into the industrial era of the nineteenth century.² As early as Charles Dickens’ Hard Times (1854), and then more recently with John Steinbeck’s Grapes of Wrath (1939), and with Rachel Carson’s Silent Spring (1962), writers have warned us about the environmental damage caused by industrial societies. In the past several decades, however, increasing dismay about environmental problems has produced new kinds of literature and a wide international focus of scholarly attention. Literature and environment studies first became formalized in American universities in the 1990s and began to spread all over the globe.³
Now ecocritical books, journals, and articles proliferate, scholars flock to formal conferences on environmental humanities, and students eagerly fill courses devoted to environmental literature, history, and philosophy.

*The Cambridge Companion to Literature and the Environment* is a guide to major areas and crucial themes in this rapidly developing interdisciplinary field of environmental literary studies. It is designed to complement Timothy Clark’s *Cambridge Introduction to Literature and Environment* (2011), by offering examples of scholarship by a range of experts, who have done most to define the field, from several countries. Although self-conscious environmentalist attention to literature is only two decades old, rich traditions in all major cultures have focused on the human place in the natural world. Examples include not only Mesopotamian and biblical texts, but also the *Ramayana*, Euripides’ *Bacchae*, Ovid’s *Metamorphoses*, the Mayan *Popol Vuh*, the ancient Chinese poetry of Li Po, the work of Japanese poets Chomei and Basho, and, of course, the European pastoral. Ecocriticism reevaluates those traditions in light of present environmental concerns, examines a wide range of recent literary works that engage environmentalist perspectives or imagine ecological catastrophe, questions the very categories of the human and of nature, probes theoretical positions that can offer rigorous grounding for ecological thought, and necessarily turns toward the life sciences to restore literary culture to the fabric of biological being from which it has emerged and within which it will always be enveloped. Its scope includes poststructural critiques of nostalgia and theoretical naiveté in nature writing, Marxist and feminist exposure of political bad faith in the pastoral tradition and deep ecology, examination of literary engagement with biological sciences, links between environmental philosophy and ecocritical theory, critical animal studies and literary animals, postcolonial and globalist perspectives on literature from around the world, “posthumanism,” attention to new media that has grown out of literature, and rhetorical studies of public and governmental discourse about the environment. Studies in literature and the environment are expanding so rapidly, both geographically and intellectually, that this book cannot include many important topics and global traditions such as premodern literatures, science fiction, literary attention to plants and agriculture, and literatures from Asia, Africa, and precolonial America. Nevertheless, the chapters that follow indicate the complex texture of possible approaches to virtually every literary tradition.

Writing about the natural environment has a long protohistory in Britain and Ireland, as both Alfred Siewers’ chapter on “Green Otherworlds of Early Medieval Literature” and Terry Gifford’s “Pastoral, Anti-Pastoral, Post-Pastoral” demonstrate. But aside from Celtic traditions, and long history
of pastoral, writing about the natural world in the past was often negative. Grim winter scenes of crags, wolf-haunted valleys, tangled forests, and stormy heaths appear from Beowulf and Sir Gawain and the Green Knight to Shakespeare’s King Lear. John Donne wrote of the world’s disfigured proportions, with “warts and pock-holes in the face/ Of th’earth,” and the Pilgrim colonists arriving on the coast of Massachusetts in 1620 saw only a howling wilderness or haunt of Satan.

The late seventeenth century, however, brought dramatic changes in taste. The beginnings of modern science and industrial technology, together with aesthetic influences from India and China, led to delight in vast perspectives, dramatic storms, huge mountains, and raging torrents as well as more ordinary rural scenes. The concept of the Sublime was resurrected from the treatise of Longinus, an otherwise unknown Greek rhetorician of the first or third century AD, and popularized by the Earl of Shaftesbury and Edmund Burke in the eighteenth century, while Kant theorized the Sublime in German philosophy around the same time. As Marjorie Nicolson pointed out, this movement amounted to the invention of a new way of thinking about the natural world, one deeply entangled in theological, philosophical, and scientific debates.

For Kant, the Sublime was a response to the vast powers of the natural world that elevates the imagination to a rational understanding of infinity, which dwarfs nature. He wrote that such sights as towering, craggy mountains; erupting volcanoes; violent hurricanes; lofty waterfalls; and turbulent oceans “exhibit our faculty of resistance of trifling moment in comparison with their might. But provided our own position is secure, their aspect is all the more attractive for its fearfulness. … Therefore nature is here called sublime merely because it raises the imagination to a presentation of those cases in which the mind can make itself sensible of the appropriate sublimity of its own being, even above nature (emphasis added).” Raymond Williams anatomized the class privilege involved in such attitudes by noting that “the wild regions of mountain and forest were for the most part objects of conspicuous aesthetic consumption.” Only those with adequate security could afford to wander at leisure and aestheticize such regions. Thus we can understand why colonial control of vast new lands and industrial production offering domestic comfort and wealth for literary Europeans might make aesthetic appreciation of dramatic natural scenes a possibility. They were no longer so threatening. The aesthetics of Romanticism were made possible by relative privilege and environmental domestication at home, and by conquest abroad. This was true as well for the American landscape painters of the Hudson River School and for James Fenimore Cooper’s fictional forests of the same period. The actual forests of early New England had long been mowed down, as environmental historian William Cronon explains,
and the national mythology about wilderness erased the violent appropriation of the continent by European settlers.¹⁰

Romantic attention to the natural world must thus be understood as double-edged, part of a reaction against the environmental blight of industrialism, at the same time that it was primarily the work of a privileged elite, associated with imperial conquest. Jonathan Bate's inaugural British study in environmental criticism, *Romantic Ecology: Wordsworth and the Environmental Tradition*, seeks to rehabilitate Wordsworth's poetry of nature as an awakening of genuine ecological interest.¹¹ And as Bate demonstrates in a later book, poems such as Byron's “Darkness” and Keats's “To Autumn” respond to genuine environmental events. In this case they respond to the consequences of the Indonesian Tambora volcano eruption in 1815, which filled earth's atmosphere with dust that caused lowered temperatures and failed harvests all over Europe for three years. Keats's ode celebrates the return of normal harvest bounty in 1819.¹² But Timothy Clark remarks that while reaffirming the importance of the natural world for literary criticism, Bate risks “over-idealising premodern and capitalist ways of life.”¹³ Dickens was far ahead of our own ecocritical interest in environmental justice, with novels such as *Hard Times* and *Bleak House* depicting grim industrial cities and the miasmic squalor of London slums. His heroes and heroines, however, typically escape into the safety of comfortable bourgeois establishments surrounded by green spaces. Across the Atlantic, Emerson's foundational essay “Nature” begins by claiming “an original relation to the universe” through the natural world for American writers, but goes on to feminize Nature and describe her meekly receiving the dominion of man. “Nature” ends with a heroic call for the kingdom of man over nature.¹⁴ Thoreau's essay “Walking” similarly aims to speak a word for Nature and claims that “in wildness is the preservation of the world,” yet celebrates the westward migration of European settlers into this “wildness” as the nation's destiny.¹⁵ Scottish immigrant John Muir followed the American pattern of moving westward to California for such adventure. But he chopped down primeval redwood forests before turning to worship the sublime landscapes of the Sierras and to fight to save Yosemite and other “wilderness” landscapes – while evicting the indigenous inhabitants who had lived there for thousands of years. One of the clearest ironies of this historical moment is Emerson's trip across the continent on the new transcontinental railroad that ensured the domestication of the “wilderness,” where he met Muir in the redwood forest and had a giant Sequoia tree named after him by his admiring follower.

Everything changed for Western culture's sense of the human place in the natural world when Darwin published *On the Origin of Species*. Its effect
was widely evident in nineteenth-century English literature, as Gillian Beer has demonstrated in *Darwin's Plots: Evolutionary Narrative in Darwin, George Eliot, and Nineteenth-Century Fiction*. Evolutionary notions about the struggle for life began to enter the novels of George Eliot and shape Thomas Hardy's depiction of life in the countryside, no longer a site of pastoral ease or *otium*. Similarly, American literary naturalism applied evolutionary assumptions about heredity and environmental struggle to grim settings, from Jack London's Alaska to Theodore Dreiser's grimy Chicago and Frank Norris's California landscapes of bloody struggle between farmers and railroad monopolies. Enormous vistas of human development from primeval origins during millennia of geological upheaval and climate change have haunted European and American literary constructions ever since, ranging from Virginia Woolf's repeated motif of mastodons and rhododendrons in Picadilly hovering behind the modern world to Faulkner's Mississippi swamps and Seamus Heaney's Irish bogs. Twentieth-century sciences of relativity theory, quantum physics, paleoanthropology, evolutionary biology, and studies in ecological dynamism have challenged literary explorations of human experience in most major cultures by now.

Ecocriticism grows out of this context, in some ways reviving pastoral and romantic attitudes toward the natural world, but informed by modern science and responding to alarm about the fragility of biological environments increasingly devastated by human technologies. Mid-twentieth-century works such as Aldo Leopold's *Sand County Almanac* urged an ethics of nature and wildlife preservation, and Rachel Carson's *Silent Spring* dramatized the devastating ecological effects of pesticides, creating a national uproar that helped to launch the American environmental movement and spread its influence around the world.\(^6\) Leo Marx's *The Machine in the Garden* (1964) and Raymond Williams's *The Country and the City* (1973) launched critical reevaluations of pastoral traditions in light of environmental change and its relation to industrialism, political power, and colonization.\(^7\) During the explosion of environmental interest in the 1970s, Joseph Meeker introduced explicit environmentalist criticism in *The Comedy of Survival: Studies in Literary Ecology*, followed by William Rueckert's essay "Literature and Ecology: An Experiment in Ecocriticism."\(^8\) By 1990, Glen Love was calling for an ecological criticism in the United States, and around the same time in the United Kingdom, Jonathan Bate published *Romantic Ecology: Wordsworth and the Environmental Tradition*.\(^9\) Love's challenge stimulated a group of young American scholars to organize the Association for the Study of Literature and Environment in 1992, with its first international conference held in Colorado in 1995. Lawrence Buell published his pioneering work, *The Environmental Imagination: Thoreau, Nature*.
Greg Garrard organized the first ecocritical conference in the United Kingdom in 1997 at Swansea, followed a year later by the inaugural ASLE UK meeting in Bath. Interest in environmental criticism spread quickly, and international affiliate organizations began to spring up in many Asian countries and in Europe, as well as in the Commonwealth. New challenges from globally spreading pollution, wildlife extinction, climate change, and increasing environmental injustice for vulnerable communities in the global south have stimulated poets and fiction writers to increase their attention to environmental dangers. Novels such as P. D. James’s *The Children of Men*, Amitav Ghosh’s *The Hungry Tide*, Frank Schätzing’s *The Swarm* (original German *Das Schwarm*), Octavia Butler’s *Parable of the Sower*, Don Dilillo’s *White Noise*, Margaret Atwood’s *Oryx and Crake*, and Cormac McCarthy’s *The Road* all testify to this trend.

As chroniclers of ecocriticism’s development have noted, we have moved quite rapidly beyond efforts in the 1990s to define ecocriticism and develop a canon of texts that are consciously environmental in their orientation. While challenges to pastoral nostalgia, self-indulgent nature writing, class and gender privilege among environmental activists, the myth of “wilderness,” and unproblematic appeals to “nature” have been voiced by some ecocritics from the beginning of the movement, increasingly complex and theoretically sophisticated analyses of environmental literature have come to dominate the field by its third decade. Environmental criticism has moved beyond earlier preoccupations with subjective experience of wild or rural places to increasing considerations of urban environments, collective social situations such as those of oppressed minorities forced to live in polluted surroundings, postcolonial social and political realities, and global threats from pollution and climate change. Environmental justice criticism has become especially influential since the publication of Joni Adamson’s 2001 book *American Indian Literature, Environmental Justice, and Ecocriticism* and *The Environmental Justice Reader: Politics, Poetics, and Pedagogy*, which she co-edited with Mei Mei Evans and Rachel Stein. This emphasis has become global, as seen in Rob Nixon’s *Slow Violence and the Environmentalism of the Poor*. Increasing attention to the wider community of life in which human cultures are immersed leads some ecocritics to explore literary engagements with evolutionary biology and animal studies. Graham Huggan and Helen Tiffin’s *Postcolonial Ecocriticism: Literature, Animals, Environment* explores the overlap between postcolonial concerns and the global problem of our relationships with other creatures, while Philip Armstrong’s *What Animals Mean in the Fiction of Modernity* considers human-animal relationships in the context of colonialism, decolonization, globalization, and
Introduction

scientific animal studies in fiction from *Robinson Crusoe* and *Moby Dick* to Yann Martel's *Life of Pi*. Global risk from climate change is another area of expansion, as in Ursula Heise's *Sense of Place and Sense of Planet: The Environmental Imagination of the Global*.26 Theoretical approaches to “the crisis of the natural” and posthumanism engage a number of ecocritics, and renewed attention to European philosophy provides further conceptual sophistication. As Timothy Clark explains, because of the intersection of so many exciting subjects for critical attention, the potential for ecocriticism is to be “work engaged provocatively both with literary analysis and with issues that are simultaneously but obscurely matters of science, morality, politics and aesthetics.”27 It is part of a profound, many-faceted cultural effort to reconsider the human place in the world.

The chapters in this volume are organized into four main categories: “Foundations,” “Theories,” “Interdisciplinary Engagements,” and “Major Directions.”

**Foundations** offers three studies of traditions that are precursors to contemporary environmental approaches to literature. Terry Gifford's opening chapter on “Pastoral, Anti-Pastoral, and Post-Pastoral” surveys this central European genre focused on rural settings, which was established by Theocritus more than two thousand years ago. Its complex presence continues everywhere European cultures have spread their influence. In Shakespeare we see comic as well as much darker questionings of the habit of escape from corrupt urban spaces into charmed or terrible countrysides, from *Midsummer Night's Dream* and *As You Like It* to *King Lear* and *The Tempest*. Gifford describes how American colonization gave rise to new pastoral concepts associated with wilderness, discusses ecocritical controversies about whether or not the tradition has outlived its usefulness, and offers the “post-pastoral” as a concept that reaches beyond the limitations of pastoral conventions while continuing to explore their valid dimensions.

In “The Green Otherworlds of Early Medieval Literature,” Alfred Siewers adapts Northrup Frye's concept of “green world comedy” to read key early Celtic texts that evoke a natural yet magical realm beyond that of everyday human experience. From the twelfth-century Welsh *Mabinogi* to Old Irish tales, the heroic *Táin Bó Cúailnge*, and *Sir Gawain and the Green Knight*, a sense of the “other side” of nature, which humans cannot fully know or control, informs the depiction of landscapes, forests, and countryside. Siewers ties these traditions to more recent theories about the agency of the nonhuman world such as Gilles Deleuze and Félix Guattari's ideas about early art, biosemiotics, and Merleau-Ponty’s philosophy of embodiment.

Shari Huhndorf examines Native American literary resistance to landscape appropriation in her essay, “‘Mapping by Words’: The Politics of Land
Westling

in Native American Literature.” Using a case study of D’Arcy McNickle’s novel *Wind From an Enemy Sky*, Huhndorf demonstrates how contemporary texts such as *Wind* provide counterhistories to dominant narratives that erase Native people, and they lend moral weight to Native claims by depicting the obscured violence of colonization. These texts deploy traditional indigenous senses of space to dispute ecologically destructive colonial privatization and manipulation of the land.

**Theories** includes four essays about theoretical perspectives on the natural world in modern philosophy, gender studies, and literary treatment of wilderness. In “Romantic Roots and Impulses from Twentieth-Century European Thinkers,” Axel Goodbody examines approaches from Heidegger’s and Merleau-Ponty’s phenomenology to Adorno’s Marxism, Deleuze’s and Westphal’s theories of spaciality, Uexküll’s *Umwelt* theory, and Derrida’s and Agamben’s posthumanism. Coherent theoretical frameworks for environmental criticism can be developed from such positions that question Western traditions of human exceptionism and help to revise our sense of the human place in the biological community. In a complementary way, Timothy Clark’s “Nature, Post Nature” offers a sustained critique of environmental debates about this concept in the second decade of the twenty-first century. Demonstrating how problematic conventional notions of a nature/culture divide have proven, he reviews historical contrasts between Hobbes’s and social Darwinists’ concept of a nature defined by violent struggle on the one hand, and Rousseau’s definition of an innocent pre-cultural condition as the natural state of man on the other. Clark sees a new kind of romantic humanism arising in the ecocriticism of Jonathan Bate and Lawrence Buell, but cautions that far more skeptical and provisional cultural diagnoses are now required in this era of the Anthropocene, when the environments in which our hominid ancestors evolved are forever gone.

Catriona Sandilands uses Shani Mootoo’s novel *Cereus Blooms at Night* to identify interhuman and multispecies encounters at the heart of almost surreal gendered, colonial, and sexual violence. This essay shows how Mootoo breaks down comfortable boundaries assumed to separate humans from other species, even invertebrates and plants. It disrupts similar gender distinctions among people as it explores interrelationships between pleasure and pain that produce radically reoriented understandings of human and ecological community.

In “The Lure of Wilderness,” Leo Mellor recalls biblical and Old English texts describing wild places as terrifyingly other, as typical of many European traditions until the Romantic Sublime transformed them to settings where fear combines with wonder to allow reassessments of self and world. He surveys complex ways poets and novelists have continued to
Introduction

explore wildness from Romantic poetry and American wilderness preservation appeals to descriptions of verdant bombsites during World War II, as well as writing haunted by environmental dangers today. Scope narrows in the new British nature writing of naturalist Richard Mabey and Robert Macfarlane, who locate wildness in overlooked cracks of city life and hidden corners of apparently domesticated and menaced landscapes, suggesting possible resilience.

**Interdisciplinary Engagements** includes three chapters on the new interdisciplinary field of biosemiotics, Thoreau’s natural science in relation to ethno-botany, and critical animal studies. Wendy Wheeler’s essay on “Biosemiotics and the Book of Nature” describes a revolution in the sciences of evolution and ecology growing out of the new interdisciplinary movement of biosemiotics. Realizing that mechanistic descriptions of organisms and natural processes are insufficient, a group of scientists and linguists in Europe and semioticians in North America propose instead that biological information must be understood as biosemiosis – the action of signs, and communication and interpretation in *all* living things from the single cell to complex multicellular organisms. This means that what we understand by “mind” and “knowledge” must necessarily shake off its purely anthropocentric connotations, and that human culture evolved and remains within this matrix. Thus humanistic disciplines – and literary studies – are linked with science in exploring what Jesper Hoffmeyer calls “signs of meaning in the universe,” and metaphor is not merely a figure of speech but the literary expression of the play of similarity and difference that defines all biological and ecological meaning.

In “Sauntering Across the Border” Janet Fiskio connects Thoreau’s natural history practices of playful sauntering with Gary Paul Nabhan’s trespassing of material boundaries between Mexico and the United States, as well as disciplinary borders of literature, botany, and food politics. Nabhan extends Thoreau’s work by theorizing border-crossing as essential to environmental justice and by making community integral to this practice. Fiskio shows how Nabhan contributes to ecocritical practice and environmental activism through rhetorical forms, which mediate between the Western science of conservation biology and the indigenous science of the Comcɪáɪ Cs Indians of the Sonoran Desert, in a mixture of indigenous languages, Spanish, English, and Latin.

Sarah McFarland uses critical animal studies to question the human/animal aspects of the self/other binary and the arising consequences to subjectivity and species definitions in “Animal Studies, Literary Animals, and Yann Martel’s *Life of Pi*.” Through layers of ambiguity in the relationship between the boy Pi and the tiger Richard Parker as they struggle to survive on a
Westling

lifeboat in the middle of the Pacific Ocean, Martel dramatizes how we can imagine worlds where the challenges to concepts such as “humanity” and “animality” are multifaceted, diverse, and various. Ultimately, McFarland argues, humans must develop an ethics of respect for the subjective integrity of other animals.

The concluding category is “Major Directions” and includes chapters on environmental justice, climate change, Asian literatures, and eco-media. In “Environmental Justice, Cosmopolitics, and Climate Change” Joni Adamson suggests that traditional folktales, proverbs, trickster stories, and animal tales might be considered as “seeing instruments” to advance environmental understanding and justice. She describes how Anishinabe writer Louise Erdrich, novelist Richard Powers, and poets and folklorists from countries such as Columbia and Peru are reexamining indigenous stories about human relationship to animals with “situated connectivities” to specific geographies for what they might reveal about linked biophysical and social processes in response to climate change.

Reading Amitav Ghosh’s The Calcutta Chromosome: a Novel of Fevers, Delirium and Discovery (1995), Bonnie Roos and Alex Hunt’s chapter on “Systems and Secrecy” reveals a postcolonial critique that uses the metaphor of malaria to raise the specters of unspoken voices and recover their role in this history. Ghosh revives the undocumented and uncorroborated stories of those erased by imperial histories, and whose “silent” voices can be used to resist oppression and gesture toward environmental justice.

Karen Thornber emphasizes the disjuncture in East Asian cultures, where traditional reverence for nature, widely expressed in literature, has failed to prevent vast environmental degradation. Her essay, “Environmental Crises and East Asian Literatures: Uncertain Presents and Futures,” examines several recent poems and stories from China, Japan, and Korea that address the problems of damaged ecosystems with a kind of ecoambiguity about the complex, contradictory interactions between people and the nonhuman world. Such writing illuminates deeper uncertainties about such projects as the Three Gorges Dam and earthquakes that have devastated Japan and its nuclear industry, breaking the silence about terrible environmental contingencies that threaten our future.

In her chapter, “Confronting Catastrophe: Ecocriticism in a Warming World,” Kate Rigby examines the formation of modern notions of natural disaster. She surveys ecological disaster texts from Heinrich von Kleist’s short story, “The Earthquake in Chile” of 1806, Voltaire’s response to the Lisbon earthquake of 1755 in Candide, and Mary Shelley’s prophetic novel The Last Man about a pandemic in 2100, which almost wipes out human life on the planet. She appeals to Kim Stanley Robinson’s suggestion in his