In this well-written and researched book, Judith Shapiro explores the contemporary roots of China’s environmental crisis in the policies of Mao Zedong during the quarter century of his rule over China from 1949 to his death in 1976. In four substantive chapters that chronicle the history of the People’s Republic of China from the perspective of the environmental consequences of Maoist policy, Shapiro reveals an untold and chilling story of the connections between political repression and a “war against nature.” This is a book anyone interested in contemporary environmental issues should read.

Shapiro starts her narrative in Chapter 1 with the experiences of two men who dared to question official policy and paid heavily for voicing their views. In the mid-1950s, Ma Yinchu, a demographer and president of China’s flagship university, Beijing University, published the results of his analysis of China’s 1953 census, which showed that China’s population had reached 583 million. Warning that China’s development could be threatened by continued large population increases and proposing various birth control strategies (sans abortion), Ma nonetheless was branded a bourgeois “Malthusian,” criticized during the Anti-Rightist Campaign of 1957, forced to resign university presidency in 1960, and effectively silenced. Instead of population control policies, China then followed Mao’s policies based on the belief that more people meant more labor power, leading to massive population increases in the 1950s and 1960s. A similar fate befell the hydro-engineer Huang Wanli, who opposed damming the Yellow River and correctly predicted the devastating environmental consequences of doing so.

With the voices of intellectual critics silenced, Mao launched the Great Leap Forward of 1958-60 (the story of Chapter 2). These three years of utopian attempts to industrialize by tapping China’s vast store of underutilized labor yielded unscientific and unsustainable agriculture practices believed to reveal the limitations of “bourgeois science,” as well as the “backyard” steel campaign designed to catapult China ahead of Britain in steel production. Fantastic claims for harvest yields led state officials to cart grain out of villages even while poor weather was decreasing yields, causing a massive famine in which an estimated 20-30 million people died, while frenzied attempts to make steel deforested vast swathes of China with predictable environmental consequences. Further environmental damage during the
Great Leap Forward came about as a result of damming shallow rivers to create reservoirs that soon silted up and bloomed in algae.

Even though Mao was forced to “retire” following the disasters of the Great Leap, he came roaring back to power in the Great Proletarian Cultural Revolution (1966-76), another period in which he was able to pursue policies that further devastated the environment (Chapter 3). Shapiro tells the story of how the “Dazhai” model of turning hills into arable land was misapplied throughout China, with the state investing huge amounts of capital and requiring Chinese people to waste vast energies in projects that had little hope of creating fertile arable land. One particularly powerful example was the failed attempt to reclaim arable land from Dai Lake in the southwestern province of Yunnan. The diked and filled wetland proved incapable of growing grain, and ironically now has been turned into a “theme park” displaying the “traditional” lives of the non-Chinese minority peoples who live in Yunnan province.

Finally, in Chapter 4 Shapiro details the devastation wrought in the 1960s and 1970s when Mao became obsessed with preparing China for what he believed to be an inevitable war (probably with the Soviet Union) and initiated policies relocating both strategic industries to mountainous interior provinces and unemployed urban youth to rural and frontier regions to reclaim land. Shapiro gives as an example of the former the creation of the Panzhihua steel complex in a narrow river valley and the industrially induced pollution of the air, water, and soil. An example of the latter is the devastation of tropical rainforests in Xishuangbanna for rubber plantations. With these examples, Shapiro shows how yet again Maoist policies devaluing human life also degraded the environment.

In the conclusion, Shapiro is careful to avoid pinning all the blame for China’s environmental crisis solely on Mao Zedong and his policies, looking additionally back in time to China’s imperial past, which likewise saw impressive environmental change, forward in time to China’s reform era in which market-oriented policies and the pursuit of private profit continue to degrade the environment, and across the border to China’s Soviet advisers. However grim the Maoist legacy and the impact of current reform policies, Shapiro is cautiously optimistic about China’s environmental future. Citizen activism in environmental protection, the elevation of China’s Environmental Protection Agency to a ministerial level, and elements from traditional Chinese philosophy that might provide the basis for a Chinese environmental ethic all are positive developments that might reverse China’s environmental degradation: “[I]f China’s leaders can see their way toward loosening controls on public participation” (p. 211). Given the tenacity with which the Chinese Communist Party is determined to maintain its monopoly on political power, that remains a big “if.”

Reviewed by Robert Marks, Deihl Distinguished Professor of History at Whittier College, and the author of Tigers, Rice, Silk and Silt—Environment and Economy in Late Imperial China (1998) and The Origins of the Modern World: Global and Ecological Narrative (2002).
Historians’ interest in the decline of forest ecosystems in tropical settings—most of them under the legacy of former Western colonial regimes—emerged in the early 1980s, when scholars first focused attention on the Indian subcontinent under British imperial administration. Early publications relied primarily on official documentation. They tended either to exonerate the foresters, centering on the massive difficulties of their task, or to castigate them as the agents of a hegemonic state in its disempowerment of local communities. A subtler task remained: to show how far the effective control of the colonial regime actually penetrated into forested areas through the dynamics of competition and accommodation between officials and villagers. Several recent studies have gone further in describing actual conditions on the land; Modern Forests is outstanding among them. Using a rich blend of anthropology and social theory, Professor Sivaramakrishnan traces the complex webs of social hierarchy as well as political conflict on the land, which shaped a forest frontier region of Bengal. The author’s full command of his subject for the pre-colonial period enables him to make firm assessments about the transformations of land and society under European rule. He shows that pre-colonial Indian regimes had limited capacity to extract wealth from agricultural and forested land; they did not penetrate into the forest region to the extent of transforming either forest ecology or tribal subsistence communities.

The British impact ultimately ran far deeper. It had several major dimensions, including agricultural development policy, forest policy, and private sector investments. For both strategic and ideological purposes, British administrators determined that once the hinterland was under firm control, the forest people should be gradually remolded into settled farmers. The regime’s primary interest, extracting revenue from agricultural production, was the engine that drove the expansion of arable land at the expense of forest.

British capacity to extract economic and social value from the forest itself came more slowly, after the forest laws of 1855 and 1878 and the creation of the Bengal Forest Department. Only then could the regime begin systematic management of Reserved Forests and regularized extraction of timber products. The author constructs a careful analysis of “Scientific Forestry,” including its conservation dimension that most previous authors have tended to neglect. Modern forestry systems, including such fundamentals as taxonomy, forest surveys, and working plans, were keys to the “contested domain of silviculture,” in which local and Western knowledge struggled for hegemony. Colonial conservation of forests and protection of wildlife thus should be seen as contested social priorities, not just noble precursors of biodiversity defense.

Through reconstructing the realities of everyday negotiations between colonial officials and the social groups European administrators confronted in the hinterland, the author demonstrates that their ambitions had to be adjusted constantly to the degree of influence or resistance that the rural population could muster. He argues that the forest law, for effective management if nothing else, constituted a formalization of complex rights, not just a deprivation of peasants’ rights and the
centralization of authority. These issues remain highly contested today, in India and many countries. Sivaramakrishnan’s formulation makes their long evolution accessible to a wide range of readers, not only specialists on the intricacies of colonial India.

Broader audiences may find two aspects of the book problematical. The writing tends to assume readers’ familiarity with the basics of scientific forestry and the debates among recent scholars. And ecologists concerned enough with the social and administrative settings of their work may be somewhat impatient that the author’s biotic descriptions (such as the dry deciduous forest ecosystem) emerge only gradually, in the setting of his historical analysis. But the elegance and depth of his presentation makes Modern Forests an outstanding contribution to our discussion of the colonial past’s formative influence on today’s dilemmas.

Reviewed by Richard Tucker, who teaches global environmental history at the University of Michigan. Tucker has written extensively on the history of forest use and policy in British India and other colonial settings. His recent work centers on the global ecological impact of American political and corporate power; he is the author of Insatiable Appetite: The United States and the Ecological Degradation of the Tropical World. (University of California Press, 2000).


One of the most influential travel accounts of the nineteenth century was Alexander von Humboldt’s Personal Narrative (7 vols., 1814-1829), in which he told the story of his adventurous exploration of the equatorial Americas, when he charted the Orinoco River, climbed Chimborazo and tried to catalogue the bewildering richness of the region’s plant and animal life. As we know from Mary Louise Pratt’s Imperial Eyes (1992), the portrayal by Humboldt and his followers of the tropical regions of South America as well as of those of Africa significantly conditioned European perceptions of these parts of the world, and were part of expansionist and imperialist enterprises. Scientific exploration and artistic representation went together in advancing Eurocentric world politics.

This triple alliance of the scientific, the aesthetic and the political is now explored further by Nancy Leys Stepan in her captivating account of how Humboldt, Alfred Russel Wallace, Louis Agassiz and several other “greats” of nineteenth-century science “constructed” the tropics for a Western readership. Drawing on the by now extensive and familiar literature that deals with visual representation in the sciences, Stepan reproduces and interprets some of the classics of tropical portrayal, including Johann Moritz Rugendas’ South American paintings, pictures by Henry Walter Bates from his Amazon River journey, and illustrations by the notorious anti-Darwinian creationist Philip Henry Gosse.

Yet Stepan goes beyond the “tropicalization” of plants and animals, discussing at length the issue of how the native peoples were portrayed. A particular strength of her account is the interest she shows in tropical medicine, adding to the early classic engravings of landscapes the photographic record of tropical pathology of the late-
nineteenth and early-twentieth centuries. This extraordinary breadth is enriching, but at the same time exacts a price, in that for some relevant issues and literature no space was left in this volume. A full discussion of James Ryan’s *Picturing Empire* (1997), for example, in which he considers “hunting with the camera” as well as “picturing the natives,” would have been appropriate. Much would have been gained, too, from a stronger engagement with mainstream art history. Stepan’s very choice of title, *Picturing Tropical Nature*, suggests the importance of illusionism in the relation of nature accounts with the reading public. Indeed, the subject of illusion has, since the publication of *Art and Illusion* by Sir Ernst Gombrich in 1960, been central to the critical discussion of the visual arts. With the recent passing of Gombrich at the age of 92, we would do well to remember the emphasis he placed on seeing as a learned process.

Of special interest to the readers of this journal may be that Stepan takes a step in the direction of formulating an environmental art history. This she does, without explicitly saying so, by providing a visual and ideological framework for analyzing the representation of the tropics. Her book offers an insightful intellectual excursion into equatorial literature of which the pictures—the author reminds us—“are not just illustrations of tropical nature but its argument.” Stepan sets up an ambitious program whereby her pictures provide the basis for a series of probing essays directed at uncovering the common ground between the wide-ranging themes of tropical places, peoples, and diseases. Her in-depth cross-cutting of the academic disciplines of art history, natural history, and history of medicine leads to the formation of a visual environmental history in which paintings, illustrations, photographs, graphs, maps, and gardens become the objects of analysis. Not only environmental art history but also philosophy and ethics enter into *Picturing Tropical Nature* as the author deftly steers her course through a selection of nineteenth century exploration illustrations, the racial photographs of “Agassizian” science and an exposition of the concept of tropical disease. It is a challenging agenda which addresses current issues of environmental concern ranging from wilderness preservation and biological imperialism to aboriginal rights and identities.

Reviewed by Karen E. Wonders, a research associate at the Institute for the History of Science at the University of Göttingen. She is the author of *Habitat Dioramas: Illusions of Wilderness in Museums of Natural History* (Almquist & Wiksell, 1993) and currently is working on Humboldtian landscape illustrations.


Many times, reading may serve as a means of travel; reading may provide us with an adventure. In Rebecca Solnit’s, *As Eve Said to the Serpent*, the world is transported to the reader in the pictorial and rhetorical images of landscapes near and far, contemporary and biblical, real and abstract.

This book is not for an impatient person or one weak of soul. The book is organized into distinct essays, all with a unique approach to the concept of landscape. The tone of each essay is set with an introductory quote or two from authors
representing an array of philosophies. Solnit’s writing follows with a clearly stated thesis; from there the journey begins, with each of the essays continuing in a circuitous manner. For the stories and images that Solnit presents are collected from numerous references including contemporary artists, local environmental groups, and somewhat obscure historical events. There are points when the discussion seems tangential to the stated thesis and it is here that the reader’s patience is essential. For example, in the essay entitled, “The Computer: The Garden of Merging Paths,” the narrative takes the reader from Solnit’s first visit to United Technologies in San Jose to the home of Sarah Winchester: “the widow of the man whose repeating rifle was the definitive weapon in western expansion” (p. 111), to the story of the breeding of the Bing cherry. After ten or so pages of this wandering, Solnit rewards the patient reader with a précis and suddenly it all makes sense. In this essay what is often billed as clean technology is presented in a whole new light as to its impact on the landscape. The obvious effects are visible in the unbridled development of subdivisions, industrial parks, and freeways in places such as Silicon Valley—the Winchester Mystery House and United Technologies references. The not so obvious effects are expressed in society’s experiences and relationships with the landscape, most noticeably the fascination with VR, or virtual reality. Solnit also points out a new orientation to the landscape: “The real landscape of Silicon Valley seems wholly inferior, not only in the metaphor of the maze and the terrain of the offices and suburbs but also in the much-promoted ideal of the user never leaving a well-wired home and the goal of eliminating the world and reconstituting it as information” (p. 119). The reader finishes the essay pondering the Apple Computer logo. We are told that the Apple headquarters are located on the former Olson orchard—the Bing cherry reference—and then asked, “What does it mean, this rainbow-colored apple with the bite taken out of it . . . ?” (p.121).

Each of Solnit’s essays speak to the tenuous relationship between nature, culture, and science. She provides scenarios and examples that strip away superficial beauty and subtly persuade the reader into pondering the aesthetic, asking which of these perspectives controls the others or which is of greater value. Perhaps the most poignant appraisal of this relationship is illustrated through an exploration of the nuclear bomb. Solnit’s narrative speaks to the smallest particle; the atom is the smallest piece of nature. It is also a vital component in the largest reaction—a scientific marvel as the nuclear explosion, followed by the fallout—physical as the radiation and cultural in human strife.

There is some disappointment that photographs of many of the works of art cited by Solnit are not included and that many of the images that are shown are without explanatory text.

In Eve Said to the Serpent the prose and images are complex. Through these, the message that Solnit communicates is quite simple—the landscape is not just a series of geological formations nor just a collection of locations. It is a manifestation of societies new and ancient so entangled that any hopes of redemption and preservation may be thwarted by the very intelligence that has fed the destruction.

Robin E. Hoffman teaches with the Faculty of Landscape Architecture at the SUNY College of Environmental Science and Forestry in Syracuse, N.Y. Her research focuses on visual assessments of forested environments.

Environmental studies and American studies are wildly popular undergraduate majors. Any lecturer who has tried to design an introductory course in these fields knows how difficult it is to fashion a coherent story out of four hundred years of events. It is especially difficult to retain complexity and nuance while racing through the decades. In this new reader, historian Chris Magoc provides a helpful collection of documents and essays for teaching introductory courses about the changing American relationship to the environment.

Lecturers will find So Glorious A Landscape a useful compilation of American responses to environmental change. Historians may want to supplement it with works that focus on the causes and effects of environmental change, such as Carolyn Merchant's edited collection, Major Problems in American Environmental History: Documents and Essays (Lexington, Mass.: D.C. Heath, 1993), or John Opie's textbook, Nature's Nation: An Environmental History of the United States (Fort Worth, Texas: Harcourt Brace College Publishers, 1998).

So Glorious A Landscape is divided into five thematic, roughly chronological sections. The author introduces each section with an interpretative essay. Essays take up about a third of the 300 pages. The rest of the book consists of documents taken from every period of American history and from a wide variety of perspectives. These range from an Acoma Pueblo creation myth to Ron Arnold's 1996 anti-environmentalist “Wise Use” manifesto. With few exceptions, the documents are “soft” sources, reflections on the human place in nature, rather than “hard” sources like statistical information, statutes, or scientific studies.

Magoc's essays work hard to hold together the documents, and the book's five sections are well organized. Historians will appreciate Magoc's attention to environmental historiography, most visibly in Part four, "Power and Place: The Meeting of Social and Environmental History" (pp. 151-216). Part two, "Nature's Nation: The American Landscape and the Nature Writing Tradition" (pp. 53-102), is particularly good. The essay and sources are a wonderfully concise and lucid introduction to American writing about nature from Thoreau to Annie Dillard. The last section, "The Environmental Era: Responses to Nature in Distress" (pp. 217-290) is less successful. Magoc's introductory essay is passionate, but the eight documents give only a partial sense of the past fifty years of reaction to environmental change. I particularly missed a discussion of the post-second world war shift to suburbs, with its impact both on the environment and on the rise of environmental thinking.

This omission points to a larger problem with the book. Beyond simply a reaction to environmental change, what does the recent popularity of environmentalism and its often desperate rhetoric reveal about American society? How does environmentalism build on or depart from earlier American thought about nature? Here again discussion of the suburbs might have been informative. Magoc's excellent essays and excerpts often provoke self-reflection. Considering the suburban landscapes his young readers grew up in would have furthered that laudable end.
This quibble aside, historians who teach environmental studies courses will warmly welcome *So Glorious A Landscape*.

*Reviewed by Matthew Booker,* a doctoral candidate in American history at Stanford University. He previously studied and taught environmental studies at the University of Oregon. His dissertation examines the human and natural history of the American West’s great tidal estuaries, San Francisco Bay and Puget Sound.


No historian has a better grasp of Western water issues than Norris Hundley. *Water and the West: The Colorado River Compact and the Politics of Water in the American West* (University of California Press, 1975), *Dividing the Waters: A Century of Controversy between the United States and Mexico* (University of California Press, 1966), and the first edition of this book are models of careful research and well written narrative. In this update, Hundley has rewritten and added large sections to the book, extending the narrative to illuminate recent controversies.

Following a discussion of California’s waterscape, Hundley writes about American Indian and Hispanic water use. He shows that as early as A.D. 1000, Indians cultivated and irrigated local plants. Most significantly, Hundley finds that Karl Wittfogel’s theory of hierarchal society under irrigation “does not seem to find support in the experiences of California’s aboriginal irrigationists” (p. 22). In examining Hispanic institutions Hundley finds little support for the pueblo right the courts recognized in Los Angeles’s claim to the Los Angeles River.

After occupation by the United States, instead of adopting prior appropriation California selected a hybrid system. In California, riparian rights and prior appropriation coexist.

Hundley offers a balanced discussion of contentious issues. These include Hetch Hetchy, Central Valley projects, Colorado River water in the Imperial Valley and Los Angeles, and the diversion of water from the north to the south.

Significant additions in this revision include more extensive discussions of the rethinking of water use and of the consequences of environmental degradation. During the 1990s California named eleven rivers to the wild and scenic system. Dam failures and changing environmental conditions have led to increasing attention to flood plain management, wetlands, and flushing toxic wastes. Hundley elaborates on such infamous cases as the Kesterson Wildlife Refuge, pesticide contamination, excessive salinity in the lower Colorado, land subsidence caused by overdrawing aquifers, and the discharge of polluted water. He presents an extended discussion of the efforts of San Diego to purchase water from the Imperial Valley. He considers the cooperation of the state and federal government to design ways to
restore the Sacramento-San Joaquin estuary. On many issues he shows that plans often have hit the brick walls of competing interests and visions.

Most important is his discussion of the persistent social and economic inequities supported by reclamation policy.

In spite of federal laws that limit holdings in reclamation projects to 960 acres and requirements that owners of acreages exceeding that limit pay the full cost of water, succeeding administrations have closed their eyes as heavily subsidized water pours into the Central Valley’s Westland. Social inequities abound as employees on such large corporate farms tend to be poorer and less educated than those who work for smaller operations.

Because of the variety of economic, environmental, social, and political interests, there seems little prospect of clean solutions to the problems of water use in California.

Like most things in America, water policy consists, as Hundley’s narrative shows, of a combination of compromise, degradation, improvement, and muddling through.

Reviewed by Thomas G. Alexander. Lemuel Hardison Redd, Jr. Professor of Western American History at Brigham Young University and author of Grace and Grandeur: A History of Salt Lake City (Heritage Media Corp., 2002). He currently is at work on a history of the role of Utah Senator Reed Smoot in the creation of national parks in Utah and the rebuilding of downtown Washington, D.C.


Kevin Dann’s history of a small river basin on the eastern shore of Lake Champlain weaves together the skeins of philosophy, ecology, folklore, and history that make up a consciousness of place. A “middling watershed,” Lewis Creek challenges our sense of appropriate scale in history, but in a region where the land has been shaped and sized in many ways over several centuries, bioregions can be intimate. In fact and metaphor, Dann traverses this rich local landscape, tapping a “deep reservoir” of images, stories, and personalities.

Dann also follows the lives of three nineteenth-century naturalists who help disclose the watershed’s history: geologist John Bulkley Perry, folklorist Rowland Robinson, and botanist Cyrus Pringle. Perry scoured Lewis Creek’s uplands for geologic memories that would explain the beginnings of life on earth. Robinson salted his novels with local myths, odd characters, suggestive place-names, and hoary dialect, thereby snatching the watershed’s rich folk tradition from oblivion. Pringle botanized the woods where Robinson collected stories and Perry gathered fossils, preserving a legacy left in the transition from temperate to boreal ecosystem.
Together they transfix this unstable landscape—its natural bedrock and its cultural overburden.

Unlike most river journeys, this one moves against the current, beginning at the lower creek’s wetlands, which served as home to ephemeral communities of plants, animals, and people. This was the last vestige of Abenaki homelands and a sanctuary for French-Canadian and African-American outcasts, a place where various natural and human cultures met and mixed. As the last resort of several locally extinct species—salmon, rattlesnake, wolf, catamount—marginal landscapes like these offer lessons about stewardship. Dann titles one chapter “Wild Apples,” commemorating, like Thoreau, the naturalizing “weeds” he discovered in the dryer soils further up the creek. As a farmer, Cyrus Pringle despised the weeds growing along the railroad right-of-way that crosses the creek here, but as a botanist he marveled at their adaptive tenacity. Just as Pringle despised the weeds, Robinson abhorred the railroad, but like other “unnatural” intrusions, it took its place in the vernacular setting, becoming commonplace. While some Vermonters battled weeds, others pressed for immigration laws to keep foreigners from their midst, unaware of the lessons to be learned from Lewis Creek’s wild apples.

Further up the valley, seasonal streams join together to form the Lewis Creek headwaters. Here in the hill country, ecology metaphors are cast in darker shades. A century of selective out-migration from the hills convinced Vermont elites that the genetic pool had gone dry. Relic families, they feared, hosted a “polluted protoplasm” that threatened Vermont’s Protestant heritage and stained its sylvan landscape with tar-paper shacks and run-down farms. Aiming to prune these family trees, the state legislature passed a sterilization law in 1931. Channeled and rip-rapped, the creek bears similar scars from ill-conceived attempts at pruning.

Having found the best and the worst in the watershed’s history, Dann explains what we can learn from this exercise. Sense of place, he shows, means connecting patterns of thought and memory—the fading stories of local heroes and local “curiosities”—to the natural landscape. Thus we learn to love the land, despite the scars and blemishes left by others who used and loved the land before us. Finding Lewis Creek is a worthy project, and it yields a fascinating history.

Richard Judd is a professor of history at the University of Maine. He is author of Common Lands, Common People: The Origins of Conservation in Northern New England (Harvard University Press, 1997), and he currently is working with Christopher S. Beach on a comparative history of environmental thought and politics in Maine and Oregon.


There are rivers today that may be teeming with fish and appear pristine. About such rivers, Ellen Wohl writes that a “segment of the river that appears scenic and attractive to the untrained observer may in fact be a physically simplified, biologi-
cally impoverished remnant of the river that existed prior to the nineteenth century” (p. 146). This is one of the “virtual rivers” of her book by the same name. As products of human artifice, such rivers are comparable to the virtual realities or simulated environments computers can create. Despite their convincing appearances, virtual rivers are greatly truncated when compared to truly pristine rivers, lacking many of the ecological functions they once had. To help educate a lay public about what rivers do and how their functions have been changed historically by human activities, Wohl offers this study of the rivers of Colorado’s Front Range (the east slope of the Rocky Mountains), specifically those of the upper South Platte basin. *Virtual Rivers* is a tool to help citizens exercise greater discernment when making decisions about water and land-use.

A professor of geology at Colorado State University in Fort Collins, Wohl has a specialist’s understanding of the many things—physical, chemical, and biological—that happen in a river system when it is healthy. Her book, though, is a primer on rivers for non-hydrologists and non-biologists. In clear prose, accompanied by well-selected photographs and line drawings, she describes facets like weather and climate, geology and topography, and plant and animal communities that shape a river, and she explains how their complex interactions with each other by means of the river bring about change over time. For example, change in annual patterns of flow can alter the types of vegetation supported along riparian areas, and alteration in the mix of riparian vegetation can modify the way the river flows through an area. She describes how changes upstream affect conditions downstream, and how changes downstream affect conditions upstream.

Wohl then reviews the history of human activities in the upper South Platte basin over the past two centuries, beginning with the trapping of beaver to near extinction during the era of the fur trade. The elimination of beaver ponds had profound effects on both the physical and the biological characters of the tributaries involved. Her narrative then moves to subsequent human intervention in the South Platte basin, summarizing the history and consequences of mining, cutting timber, building dams and canals for irrigation, introducing non-native species of fish, grazing, and building roads. Since mining and logging have subsided, conditions in the basin have stabilized. Because vegetation grows along stretches of rivers and fish live in them, it is possible for people now to think the rivers are pristine. *Virtual Rivers* will help readers see how many of today’s rivers are nevertheless impoverished products of artifice.

The book closes with a brief section about threats facing rivers now and in the near future. *Virtual Rivers* is an excellent resource for anyone wanting to be an informed participant in finding responsible ways to address those threats.

**Fredric L. Quivik** is a consulting historian of technology living in St. Paul, Minn. Much of his work is as an expert witness in litigation concerning the Superfund remediation of old mining sites in the Rocky Mountain West.

There can be no mistaking the impact of human intervention on the lower reaches of the Mississippi delta. Dubbed “Cancer Alley,” the urban industrial region stretching from Baton Rouge to New Orleans bathes in toxins discharged from an unbroken string of more than 130 major oil refineries, petrochemical plants, commercial hazardous waste incinerators, and solid waste landfills. Transforming New Orleans and Its Environs traces the environmental history of that region through a selection of essays on the impact of human activities, embracing everything from precontact Native American midden heaps and early French levees to the canalization and, more recently, the industrialization of the river. According to its editor, Craig Colten, the collection’s unifying theme is that “human action has inscribed a legacy on the Mississippi delta region wherever individuals hunted, gathered, built on, tilled, processed, or extracted objects of nature” (p. 3).

The first two selections gauge the human impact on the region before urbanization and demonstrate that human-induced environmental change began centuries ago. Turning his attention to premodern human impact, Tristram Kidder dispels the contention that New Orleans was an “inevitable city” based solely on its location at the mouth of the Mississippi alluvial valley. Instead, native Indian societies transformed the region in ways that made the site more appealing and provided the French with geographic information on the location of key portages between Lake Pontchartrain and the Mississippi River. Christopher Morris concurs that the native populations marked the region’s landscape and proffers a fascinating hypothesis on the interplay between cattle, rice, slave ownership, and French struggle to construct levees in the delta swamplands.

The next set of essays focuses on human efforts to tame the Mississippi River. Ari Kelman contends that steamboat technology reshaped the relationship between people and the valley environment, dramatically improving upriver navigation but also facilitating the process of riverbank deforestation, as steamship captains sacrificed whole forests to fuel their ships and clear the riverbanks of potential snags. Both George Pabis and Donald W. Davis address various ill-conceived efforts at flood control by civilian and military engineers, and Gay M. Gomez recounts the story of the Mississippi River flood of 1927 and its impact on the economy and the fur-bearing wildlife of St. Bernard Parish. In his always-lively style, Todd Shallat examines Hurricane Betsy and its devastating romp through New Orleans in September 1965, illustrating the awesome power of nature, the limitations of technology, and the hubris of humankind.

Not for the faint of heart, the final set of articles addresses industrial pollution along the Baton Rouge-New Orleans “chemical corridor.” Craig Colten traces a series of high profile incidents on the lower Mississippi River that shifted public attention from agriculture-derived pollution to industrial sources, and Raymond Burby lays out a blueprint for urban ecocide with an essay on the cheap labor, cheap land, and lavish tax breaks that attracted the petrochemical industry to the region after 1950. Turning to oral interviews, Barbara Allen sheds light on the hu-
man component, deftly calling attention to evidence of environmental racism in the proximity of petrochemical plants to heavily African-American neighborhoods. Finally, H. L. Bart discusses the impact of industrialization on fish diversity.

Transforming New Orleans and Its Environ provides a valuable service in fleshing out the relationship between city building and environmental transformation along Louisiana’s industrial corridor. Drawn from several disciplines, these collected essays will be important reading for students of environmental history and urban studies, as well as those concerned with the history of water resources, technology, or the befouling of Louisiana’s environment.

Reviewed by Matthew T. Peary, district historian for the Army Corps of Engineers in St. Paul, Minn., and adjunct professor of history at the University of North Texas. He has recently completed an article on the 1928 Federal Flood Control Act, which will be appearing in the Summer 2002 issue of The Journal of the Illinois State Historical Society.


Part of the University Press of Virginia’s new series “Under the Sign of Nature: Explorations in Ecocriticism,” The Best and Worst Country in the World is the first of several planned volumes by Stephen Adams about the landscape of Virginia. In this volume, which covers the state’s history to 1700, Adams explores how changes in the land and changes in human perception continually interacted to produce “the early Virginia landscape,” itself an ever-changing, perspective-dependent human construct.

Resembling in some ways a local version of D. W. Meinig’s The Shaping of America (Yale University Press, 1986-98), The Best and Worst Country in the World surveys its rich subject from the perspective of several disciplines, including ecocriticism, environmental history, cultural geography, and natural history. As his title suggests, Adams is interested in the reasons for and effects of the fact that, “depending on the perspective of individual viewers, Virginia is variously labeled a New World Eden, Canaan, mine, beautiful and fertile woman, frustrating barrier to East India, hell-hole, pestilent swamp, barren wilderness, and haunt of rogues and exploiters” (pp. 9-10).

Adams chronicles the fate of early Virginia in eight chapters, beginning with its geological and biological history and then turning to the history of its inhabitation by Native American, Spanish, and English residents and visitors. For many readers, one of the most interesting chapters will be Adams’s discussion of the Spanish Jesuit mission in Virginia, which existed for less than a year and remains a largely unheralded moment in the history of European settlement. The book’s best documented chapters not surprisingly concern Jamestown: the first, a careful analysis of the competing metaphors used to promote the landscape to potential settlers, and the second, a revealing survey of contrary metaphors that picture Virginia as a death
trap or slaughterhouse. Other chapters concern Virginia Indians and the land, the Roanoke colonies, the Royal Colony from 1625 to 1700, and a final, miscellaneous chapter on tobacco, the look of the land, and western explorations. The book also features a term-defining introduction and an epilogue that anticipates the effect of eighteenth-century notions of the sublime on utilitarian approaches to the landscape.

The strengths of this book are many, not least of which is Adams’s mastery of the complexities of early American literature, history, and culture. To this broad base of knowledge he brings a consistent concern with human-environment interactions, noting, for instance, that “not only did the early Virginians perceive the landscape through lenses they brought with them from England, but they also tried to establish in the New World wilderness an environment that resembled what they had left behind” (p. 151). Well illustrated with photographs, maps, paintings, and engravings, *The Best and Worst Country in the World* demonstrates all too well the price these early Virginians paid for their ignorance and hubris, whether it be their murder at the hands of the Indians they displaced or their starvation on account of their failure to understand their new environment. The only major weakness of the book is Adams’s own failure to apply his critical method to Virginia’s prehuman history, describing its geology and biology from a privileged realm, as if science were exempt from the conventions of storytelling he successfully analyzes everywhere else.

What emerges most of all from this thoroughly satisfying book, however, is the tragedy of our own ignorance about early American responses to the landscape. Again and again, Adams must admit how little we really know of what Native Americans, African Americans, white indentured servants, women, and the lower classes thought about their environment. What *The Best and Worst Country in the World* ultimately demonstrates is that we live in a double bind, as ignorant of others’ responses to the land as we are of the land itself. It is to Adams’s great credit that he has rescued so many of these responses so well and interpreted them with such judgment and insight.

Reviewed by Daniel J. Philippon. Philippon is assistant professor of rhetoric at the University of Minnesota, Twin Cities, where he teaches courses in environmental rhetoric, history, and ethics. He is coeditor of *The Height of Our Mountains: Nature Writing from Virginia’s Blue Ridge Mountains and Shenandoah Valley* (Johns Hopkins University Press, 1998), and editor of *The Friendship of Nature, by Mabel Osgood Wright* (Johns Hopkins University Press, 1999).

**Lake Erie Rehabilitated: Controlling Cultural Eutrophication, 1960s-1990s.**

“Cultural eutrophication” is the overnourishing of waters from human activity, resulting in deleterious ecological effects like increased algae and reduced oxygen. By the late 1960s, there was widespread concern on both sides of the international
boundary that Lake Erie was one of the worst examples of this type of pollution. How governments passed laws and industry changed practices to keep Lake Erie from suffocating to death is the story William McGucken wants to relate.

From a technical point of view, he is largely successful in this endeavor. Digesting a plethora of scientific studies and government reports, McGucken presents a straightforward account. Though he tries to convert his findings into an intelligible form for the nonspecialist, the very nature of the subject sometimes makes for less than exciting reading. Quoting, for example, from a 1987 scientific report, he informs the reader that “it can be concluded that the phosphorus control program has been successful in maintaining the oligotrophic status of Lakes Superior and Huron and has helped to restore Lakes Michigan, Erie, and Ontario to an oligo/mesotrophic state” (p. 269).

For those old enough to have been environmentally aware by the 1960s, McGucken’s account of the impact of phosphate detergents may bring back memories of the controversy and prove to be the most interesting part of the book. To a greater degree than elsewhere in his volume, the author develops his discussion around familiar personalities, companies, and organizations rather than simply summarizing the findings of committees, boards, and task forces.

Unlike in Canada, where the federal government moved quickly to limit detergent phosphates, the American government chose to ask the detergent industry voluntarily to reduce, and eventually eliminate, phosphates. One reason was concern that proposed substitutes might prove to be equally harmful to the environment. A bigger reason was that powerful companies like Procter and Gamble and Colgate-Palmolive lobbied against the elimination of phosphorus in detergents, claiming that the nonmetallic chemical element did little or no harm to the environment.

The detergent industry, however, soon found itself arrayed against some influential critics, including radio and television personality Arthur Godfrey, and Betty Furness, of the State of New York Consumer Protection Agency. Groups as diverse as the National Audubon Society and the Buffalo Metropolitan Housewives to End Pollution lined up against phosphates. Still, it would not be until 1990 that legislation to eliminate them from detergent-use in the entire Lake Erie drainage basin finally went into effect.

In researching the developing opposition to phosphate detergents, as well as other forms of cultural eutrophication, McGucken might have cast a wider net. He concentrates on government and industry sources while appearing to make short shrift of citizen groups. Chief among these were the large number of sport-fishing enthusiasts dependent on clean water for their continued recreation. While McGucken may not have covered every aspect of the subject in equal detail, he has broken much new ground. His book is an important addition to the literature on the environmental history of the Lake Erie drainage basin and is sure to become a standard reference.

Reviewed by John F. Reiger, professor of history at Ohio University-Chillicothe. His most recent publication, with a broadened historical sweep, is the revised and expanded third edition of American Sportsmen and the Origins of Conservation (Oregon State University Press, 2001).

In this extraordinarily well-researched book, Dave Dempsey takes his readers through Michigan’s environmental history since the arrival of European settlers. The fifteen chapters are skillfully organized chronologically as well as by subject, moving from an emphasis on natural resources such as forests and wildlife to a focus on water and air pollution and toxic waste management. Throughout the book, examples of “ruin” and “recovery” are presented, including the rampant deforestation in the late 1800s and subsequent reforestation efforts by the state starting in the early 1900s, when Michigan’s first forest reserve was established; the devastating effects of the post-World War II introduction of hard pesticides such as DDT, and their subsequent outlawing in Michigan in 1969; and the choking of Lake Erie by phosphate induced algal growth in the 1960s, and the ensuing ban on high phosphate household laundry detergents in 1977.

Ruin and Recovery, however, does not just outline past and present environmental issues in Michigan and their solutions. It also describes in vivid prose the administrative and political forces and processes that have shaped Michigan’s environmental policy in the twentieth century and that have laid the foundation for the new millennium. It shows how the prevailing societal environmental attitude has slowly changed from being dominated by resource use and profitability objectives in the late 1800s to sustainability, recreation, public health, and a respect for nature at the end of the twentieth century. This attitudinal evolution took place through a combination of public recognition of environmental degradation and ensuing political pressure, and leadership by visionary environmental activists, certain state agencies—most notably the Michigan Department of Natural Resources (DNR)—and a few politicians. Much attention is given to the background, vision, and role of charismatic individuals such as James Oliver Curwood and Genevieve Gillette, leaders of Michigan’s home-grown environmental organizations such as Tom Washington of the Michigan United Conservation Clubs and Joan Wolfe of the West Michigan Environmental Action Council, and DNR leaders like P. J. Hoffmaster and Ralph MacMullan.

One of the few shortcomings of Ruin and Recovery is the choice of the subtitle Michigan’s Rise as a Conservation Leader, which appears over-self-congratulatory and possibly conceited, and which may keep readers from other states from choosing this book. Indeed, the author does not define conservation leadership, and the book presents a shaky case at best for bestowing this title upon Michigan. For instance, the book states that Michigan has only had one environmental governor (William Milliken) (p.170), and that current governor John Engler is slowly but surely undermining some of the progress that has been made (p.263). Indeed, the author asserts that “it is clearly wrong to turn to elected officials for conservation leadership” (p.297). Furthermore, although Michigan was the first to ban DDT (p.137), and acted decisively and proactively in shutting down mercury discharges (p.166), the book also contains numerous examples where state government looked the other way even when confronted with overwhelming evidence of resource
mismanagement and willful pollution, e.g., Hooker Chemical Company, (p. 225). In addition, the book fails to describe any kind of conservation leadership role among states, and does not compare Michigan’s accomplishments with those of other states.

Nevertheless, Ruin and Recovery is a valuable addition to any environmental history and policy library. It also will be very useful in the classroom to demonstrate state policy making and the role of state agencies and non-governmental organizations. However, for a full environmental history of Michigan, additional sources need to be drawn on, as the author of Ruin and Recovery has fairly systematically avoided any discussion of the role of federal laws and agencies on Michigan environmental policy, and has written primarily from an environmental platform.

Reviewed by Irene C. Frentz. Frentz is a Ph.D. candidate in environmental dynamics at the University of Arkansas, and has a Master’s degree in natural resources and environment from the University of Michigan. Her dissertation research focuses on sprawl near public lands.


Wilderness is a tricky term for activists, bureaucrats, and historians alike. One person’s wild is another’s tame; one person’s idea of a good use for wilderness is another person’s nightmare. In short, it is practically impossible to reach agreement on what wilderness is, where it is, or what to do with it. In his monograph, George Warecki has shown how the government and people of Ontario wrestled with the concept and use of wilderness in the middle of the twentieth century, focusing on two provincial parks, Quetico and Algonquin.

As his sub-title suggests, Warecki endeavored to write both an intellectual history of Ontarians’ ideas about wilderness and a political history of the battles over park access and use. To convey the idea that there was a great shift in political strategies, the book is divided into two sections. The first, and much shorter, part addresses the years of “Quiet Diplomacy,” from the 1920s into the early 1960s. The second covers the early 1960s into the early 1970s, which Warecki calls “The Environmental Era.” While the book is reasonably well written and individual chapters well organized, the press could have improved it with a firmer editorial hand.

Warecki is strongest when he analyzes the various people and groups involved in the wilderness debates. While many groups and individuals appear, two in particular stand out, the Quetico-Superior Council (QSC) and its sister organization and the Algonquin Wildlands League (AWL). The QSC, founded in 1928, combined businessmen and scientists from both sides of the border into an organization that used quiet and sometimes ham-handed diplomacy to work with Ontario’s bureaucrats to promote multiple use of Quetico park. By and large, these old-style conservationists agreed that properly regulated logging in provincial parks was economically imperative. Forty years later, in the environmental era, a group of academics and activists formed the AWL, which practiced loud media manipula-
Book Reviews


Warecki argues that quiet diplomacy had its moments, largely because of its political realism, but only the AWL’s noisy campaign was able to attract grassroots support for its efforts to protect wilderness from the impact of logging. In effect, each group was a product of its time, and each had its own blind spots. The QSC was too enamored of its influence, and the AWL tried to appeal to the mass of Ontarions while simultaneously limiting the number who could actually visit the parks. In the end, the provincial government responded to the various pressures it faced by settling on a policy that preserved some logging and some access, what it called the “average man’s wilderness.”

Although the political history is often quite good, the same cannot always be said for the intellectual history. After acknowledging that wilderness is a slippery idea, Warecki writes that his book “considers wilderness to be what the preservationists perceived, and fought for, as wilderness” (p. 3). It is not clear, though, where the preservationists drew the line. In fact, it is not always clear who the preservationists were, since he sometimes seems to distinguish them from conservationists but at other times seems to equate them.

In sum, Warecki’s book is a fine account of the battles waged to determine the future of two important North American parks, but it does not add as much as it might have to our understanding of how Canadians thought about wilderness.

Reviewed by Kurk Dorsey, associate professor of history, University of New Hampshire. He is the author of The Dawn of Conservation Diplomacy: U.S.-Canadian Wildlife Protection Treaties in the Progressive Era (University of Washington, 1998), and he currently is working on a book on international efforts to regulate whaling in the twentieth century.


According to John F. Reiger, hunters and anglers have never gotten enough respect from the academic community. For decades, scholars regarded the pursuit of fish and game as a whimsical diversion that held little cultural significance. More recently, Reiger contends, animal-rights advocates and a sympathetic left-leaning professorate have condemned hunting and fishing as barbaric blood sports more worthy of contempt than scholarly attention. As a result, the contributions of sportsmen to American conservation have been overlooked or simply ignored.

In the first edition of this provocative book, published in 1975, Reiger urged historians to put aside such prejudices and give nineteenth-century hunters and fishermen their due. Drawing on the papers of George Bird Grinnell (organizer of the first Audubon Society and, in 1975, a neglected figure in conservation history), Reiger argued that an elite group of outdoor enthusiasts began to push for protection of wildlife and other resources in the 1870s. In the pages of American Sportsman, American Angler, and Forest and Stream (owned and edited by Grinnell from 1880 until 1911) these patrician lovers of the wild advocated “the code of the sports-
man” which required that fish and game be taken efficiently, elegantly, and with appropriate appreciation of the natural world. Among those attracted to the sportsman’s cause was Theodore Roosevelt who, in 1887, joined Grinnell in founding the Boone and Crockett Club, the first private organization to take on national conservation issues. Under Grinnell’s tutelage, and in keeping with the code of the sportsman, Roosevelt developed the basic values that he took to the White House. Indeed, Reiger believes that Grinnell, not Gifford Pinchot, had the most influence on Roosevelt’s conservation agenda.

That thesis remains intact in this expanded version of the book. A new introductory chapter on antebellum sportsmen considers the proto-conservationist thinking of men like William Elliott, a Carolina planter who routinely chastised both market hunters and his parvenu neighbors for their wanton slaughter of game. Likewise, a new epilogue reminds us that Aldo Leopold—lauded by environmentalists and academics alike for his insistence on a more ethical relationship with nature—was, in fact, an avid hunter and, in Reiger’s view, the quintessential sportsman-conservationist.

If any problem persists in the new edition, it might be that the author’s indictment of historians for their neglect of hunters and fishermen now sounds just a trifle dated. Several scholars interested in the South—Stuart Marks and Ted Ownby among them—have shown hunting to be an integral part of male culture, examining both the sportsman’s code and the Southern man’s enduring fascination with the mass kill. Recent books by Louis Warren and Karl Jacoby probe the effects of the conservation movement and its restrictive hunting laws on local people and various ethnic groups. It may be true, as Reiger asserts, that most academics still “lack experience” with “traditions of the rod and gun” (p. vii). But, in recent years, hunting and the sporting life have become important and productive topics for environmental historians.

Otherwise, with its new introduction and epilogue, the book holds up remarkably well. Carefully researched and engagingly written, it should provoke lively discussions in undergraduate classes about the role of sportsmen in protecting wildlife and, by implication, the place of hunters in the modern environmental movement. Among scholars, it will remain a mini-classic, essential reading for anyone interested in wildlife management and conservation history.

Reviewed by Timothy Silver, professor of history at Appalachian State University. Silver’s most recent book, an environmental history of Mount Mitchell and the Black Mountains, is slated for publication by the University of North Carolina Press in spring, 2003.


The contribution of George Perkins Marsh to environmental history is receiving the attention it deserves. Editor Stephen Trombulak has, in So Great A Vision: The
Conservation Writings of George Perkins Marsh, produced an excellent companion volume to David Lowenthal’s recent biography of the Vermont native, politician, diplomat, and eclectic scholar. The editor’s intentions seem to be to place Marsh’s greatest work, Man and Nature, into the context of his other conservation writings, to demonstrate how Marsh’s thinking about the human relationship to nature developed, and to present the essence of his densely written and heavily documented magnum opus. He achieves these goals.

Trombulak opens with a brief biographical sketch of Marsh, presents six selections from his orations and writings, and concludes with selections from Man and Nature. He offers a brief and illuminating introduction to each address or essay in the first part, and does the same to selections from the six chapters of Man and Nature. These introductions give a brief overview of Marsh’s ideas, and place them in the context of conservation history and contemporary environmental thought. As John Elder points out in his introduction to So Great a Vision, Marsh’s book often is cited as a seminal work in the field of environmental history and philosophy, but because of its density and style it is seldom read. Trombulak’s collection is a resource helpful for introducing Marsh into college courses, succinctly presenting, in Marsh’s own words, the essence of his thinking about conservation.

Among the addresses and writings leading up to selections from Man and Nature are an 1847 speech to a Vermont agricultural society in which he touched on many environmental themes familiar today, and an 1855 lecture at the Smithsonian advocating importation of the camel for use by the military in the Southwest. This is followed by a talk to a New Hampshire agricultural society in 1856 which demonstrated his cross cultural insights into agriculture and forestry, and a report on the artificial propagation of fish commissioned in 1856 by the Vermont legislature. The final two selections are an 1860 essay on the study of nature which reveals Marsh’s anthropocentric and dominance-oriented perception of the natural, and an 1874 report to the U.S. Department of Agriculture on irrigation. All of these combine to reveal a thinker who was much the product of his time, yet one who was using his wide-ranging intellect to critically examine the relationship of human society and nature. They reveal how his thinking changed and led to his conclusion that while the earth might be made for human use, humility and systematic study of how nature works would be essential to maintaining nature’s ability to sustain human communities.

The selections from Man and Nature that conclude the book are well-chosen, effectively edited, and present the most important of Marsh’s ideas. Marsh sought to understand whether humanity is “of nature or above her.” In doing so, Trombulak concludes, Marsh “set the stage for more than a hundred years of discussion among philosophers, writers, religious scholars, scientists, and all people who develop a deep connection with their place on earth” (p. 218). So Great a Vision is a most useful introduction to Marsh’s contribution to this discussion.

Reviewed by John C. Miles, professor of environmental studies, Huxley College, Western Washington University. He currently is writing a history of American national park wilderness policy.

In *Kindred and Related Spirits*, Bonnie Gisel has provided us with two important contributions: a nearly definitive compilation of the correspondence between Jeanne Carr and John Muir and a set of clear and straightforward essays interwoven between groups of letters that place the Muir/Carr correspondence in the contexts of their authors’ respective biographies and of the larger nineteenth century world. Those familiar with John Muir’s life know that his relationship with Jeanne Carr was foundational to his work as an interpreter of wilderness. This collection of their correspondence sinks home just how important Jeanne Carr’s mentoring was to John Muir’s early development.

In the long and complex history of Muir’s literary work, scholars have recognized that the Carr/Muir correspondence has been of critical importance—and controversial. Carr acted as a very close confidant to Muir—a confessor of sorts. Thus at critical points in his life, he bared his soul to Carr in ways that he later regretted when literary agent and author George Wharton James angled to publish Carr’s collection of their correspondence. After a struggle, Muir retrieved his letters to Carr and had some sections expurgated from them, which he hoped for one reason or another to reserve from the future’s prying eyes. A collection of Muir/Carr correspondence was later published as *Letters to a Friend*, but the lack of historical and bibliographical controls on this collection has sometimes raised questions in the minds of careful readers. Gisel’s exploration of both Muir’s and Carr’s biographies has enabled her to put in definitive order the previous material and also to discover other letters and fragments previously unknown in the Muir/Carr context.

While this work makes an important contribution to the tedious work of bibliography, more importantly it makes available for a new generation some of Muir’s best and most intimate prose. One thing most Muir scholars know is that Muir’s published prose is delightful, but stilted and almost artificial compared to that found in his letters and field notes. This collection of Muir’s letters, covering a seminal period in his life (1866-1895), illuminates his thoughts and opens for the reader the real exuberance of his prose. Furthermore, Gisel’s essays are a valuable addition to this collection. Certainly a scholar could order the microfilm edition of Muir’s papers and have access to most (though not all) of the primary material contained in this book, but would be faced with the tedious task of reconstructing the chronology and character of Muir’s and Carr’s lives and relationship. Gisel has done that work and makes it available to scholars who may have been familiar with Muir, but knew little of Carr, and to general readers who may have known nothing about either. Thus, while Muir scholars and environmental historians will appreciate Gisel’s work, it will be just as valuable for the general reader. One can imagine students at all levels finding this a worthwhile collection of primary documents for the study of the environmental, cultural and social histories of Gilded Age America. Additionally it is a superb window into the soul for those voyeurs interested in the texture of human relationships. Ultimately, this is a great addition to our biographi-
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John Meyer’s argument in Political Nature is straightforward. The environmental movement is in trouble because mainstream environmental thinkers prefer to proselytize hopefully about a new ecological worldview rather than descend into the muck and mire of politics. This is so because the history of western thought has been interpreted by environmentalists as offering only two models for the relationship between politics and nature, the dualist and the derivative. The former posits nature as the primitive condition against which the advances of anthropocentric politics can be measured: Nature is the thing from which human beings have been liberated. The latter suggests a rigid and nasty environmental determinism: Political order merely encodes and enforces unchanging natural law. Since neither of these political models offers a practical way out of our environmental problems, environmental thinkers grant a limited role to politics.

Having defined this problem, Meyer proposes a third model, the constitutive, which involves a dialectical relationship between nature and politics (or, more broadly, between nature and human culture). He then locates implicit versions of this constitutive model in the work of Hobbes and Aristotle, thereby hoping to return western thought and its political traditions from the unfair exile imposed by environmentalists. Finally, Meyer argues that place-based environmentalism is the logical and desired outcome of a constitutive model, and offers several examples of “new possibilities for environmental politics.”

The basic terms of Meyer’s argument are unimpeachable. The dualist and derivative models are bad; place-based environmentalism is good. And in this very simplicity lies the book’s strength and its weaknesses. Consider the sub-text. Meyer worked for six years as a political organizer. He then went off to study political theory, with a focus on environmental politics. His conclusion—grassroots organizations are a more effective way of mobilizing people at the grassroots level than top-down federal regulation. This is an important point, but it is not exactly news. In fact, it might qualify as a tautology.

To reach this point Meyer requires his reader to endure too much bushwhacking. The sections on Hobbes and Aristotle are slight enough that they do not amount to a significant reconsideration of the nature/politics relationship in western thought, but substantial enough to distract Meyer from the book’s other, more important projects. The discussion of the literature of environmentalism is thin and overly-general, especially in its treatment of Aldo Leopold and Murray Bookchin. Indeed,
Hobbes and Aristotle seem like invasive species in the landscape of this book, crowding out space that should have been given over to something else, like pragmatism, to which Meyer alludes several times, including a few tantalizing references to John Dewey. The tradition of pragmatism is a far more compelling foundation for the constitutive, place-based environmentalism that Meyer is exploring, but he grants it little more than a cameo appearance.

*Political Nature* is like one of those multi-trail junctions. It may not be a place one will stay for very long, but it does point in several interesting directions.

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In her book, *Women in Labor: Mothers, Medicine, and Occupational Health in The United States 1890-1980*, Allison Hepler inquired into relationships between motherhood and the workplace, gender and workplace health and the utilization of gender differences to promote or hinder advancement of women in the workplace. She inquired into what she termed the long-lasting relationship between feminism and occupational health and into gender roles, especially those associated with motherhood. She has shown how they influenced workplace health policies for women over time. These are subjects generally neglected by historians of occupational and environmental health. It is to Hepler’s credit that she has pursued this interesting and provocative subject.

She intended, as stated in the introduction, to develop the idea that a long lasting relationship between feminism and occupational health exist by focusing on several questions during her examination of gender and workplace health. They are: How has protective labor legislation influenced women’s lives and men’s lives both in and out of the workplace? How did employers, reformers, and medical professionals determine which jobs were too dangerous for women and to what extent did fears about motherhood influence those decisions? How did occupational health laws reflect prevailing gender norms? How have changes in the practice of medicine affected gender norms? How did the debate over the Equal Rights Amendment shape the workplace? To what extent have occupational safety and health concerns, particularly those related to women, been socially constructed (p. 2)? Hepler’s thesis is that gender roles—especially ones associated with motherhood, medical theories, feminism, and economic priorities—influenced health policies. This thesis is woven throughout the book.

It is difficult to argue with Hepler when she points out the enduring historical dilemma. “Women are treated as equals in the workplace but without equivalent wages or help with housework. They are glorified as mother of the next generation but lack the economic independence to fill their roles properly. They can be acknowledged as biological mothers, but their fetuses may be seen as more impor-
tant than themselves. They are sometimes viewed as individuals with unique talents but at other times lose their identity by implicitly accepting workplace rules designed for males” (p. 9).

Organized both chronologically and topically, the book explores a number of aspects of the development of policies related to women’s health in the workplace. Chapter 1, “The Effects of Double Duty,” explores the early ideas about protective factory laws that supported the social role of women as mothers and became the rationale for labor laws based on gender. Chapter 2, “Industrial Poisons,” brings the history up to the 1920s with a discussion of ideas about the effect of gender on the origin, direction, scientific, political, and economic implications of occupational disease. Chapter 3, “Industrial Health In An Industrializing World,” covers the 1920s and 1930s. In it Hepler suggests that although new scientific evidence about poisons gave authority to those utilizing biological sciences to reinforce traditional gender roles, the old rationale for protecting women because of their maternal capacity survived. Discussions of The Women’s Bureau, created in 1920 in The United States Department of Labor, and The Consumer’s League were quite interesting. Chapter 4, “Women in Wartime Industries,” indicated problems women workers faced in defense industries during World War II, especially fatigue and absenteeism. The variety of women’s social roles was often over looked. The irony of women’s experience during World War II, viewed from a health and safety perspective, is that much of the basis for protective laws was undermined while few organized strategies to force employers to continue to account for socially prescribed differences between men and women existed. Hepler points out how the tension between equality and differences reared its ugly head. In Chapter 5, “Alice Hamilton and the Equal Rights Amendment,” Hepler points out the impact of ERA on women’s workplace health (1920-World War II). It includes an excellent discussion of Alice Hamilton’s perspective on feminism, women’s health, protective legislation, and ERA debates. The debates forced feminists on both sides to assess proposals on women’s workplace health. They also focused on the complexities and varieties of feminism, especially class divisions within the feminist movement. Chapter 6, “Women and the Environment,” focuses on links between home and the workplace as viewed by postwar environmental activists. In the last chapter, “Factories, Feminism and Fetal Protection Policies,” Hepler brings her history up to the 1991 Supreme Court decision prohibiting companies from imposing fetal protection policies on their fertile women workers.

In general there is much to praise about this book. Hepler has successfully defined many issues related to the health of women in the workplace and given historical perspective to the issues, especially the issue of protective legislation for women in the workplace and its consequences. When discussing feminism and feminist issues Hepler is at her best. She has broad familiarity with the literature on the subject.

Because this book is a difficult undertaking it is not surprising that it could have been strengthened in some areas. In particular, Hepler is weak in subjects of occupational and environmental health history. She has not cited much of the scholarship in these areas, Thus her analysis is uninformed and often on the surface. For example, Hepler occasionally gets carried away with concepts that are not fully ex-
explained and are presented in obscure sentences. She says, “In addition to looking at workplace issues this book extends the traditional limits of environmental history. Work in this field, began out of moral concern for the planet, has recently been shaped by endemic, structural issues of more long term and global significance” (p. 4) or, “This story begins in the late nineteenth century, when attention to occupational health was rooted in an understanding of working people's material condition” (p. 7). Neither of these general sentences is supportable. Sadly her misunderstanding of environmental and occupational health history detracts from an otherwise commendable book.


Fertilizers are unlikely heroes. But they can be dealt with in this vein, as Vaclav Smil's book on the discovery of ammonia synthesis and the subsequent rise of nitrogen fertilizers demonstrates. In some parts at least, this book reads like nothing short of a celebration of nitrogen fertilizers. One full chapter is devoted to the question how many human lives have been saved because of the use of nitrogen fertilizers. Other chapters describe how nitrogen fertilizers revolutionized traditional agriculture, how dependent we are on their use, and how, over the course of the nineteenth century, scientists gradually came to understand the importance of nitrogen fertilizers, leading up to the "brilliant discovery" (p. 61) of ammonia synthesis by Fritz Haber in 1908. Few of the issues that relate to the topic are overlooked in this book, making it something like a synthesis on a synthesis: If this book were published under a title like "Everything You Ever Wanted to Know about Nitrogen Fertilizers," few readers would find this presumptuous. However, this approach has its problems as well as its merits.

First, the merits. Smil assembles a wealth of information in his book. At some points, one might question his sources, and at other points, one would hope for more interpretation and less statistical information; but that should not cause one to overlook that one can learn a lot from this book. The core of the book is a detailed narrative of Haber's discovery, but its scope is much broader in more than one sense. Smil deals with the history of science as well as the history of the fertilizer industry, he spans his narrative from preindustrial agriculture to the present, and he uses examples from all over the world. One does not have to share Smil's enthusias-
tic proclamation that the synthesis of ammonia is “the most important technical invention of the twentieth century” (p. xiii) to come away from reading this book thinking that one previously had not given enough thought to the issue.

The deficits of this book are directly related to its merits: This encyclopedic approach relieves him of the duty to formulate guiding questions. Smil does not make clear what he seeks to explain (except that fertilizers are important), nor does he present a key argument that would structure the narrative. Consequently, Smil falls back on a rather traditional style. This is history of science as it used to be written: a story of steady advances by numerous clever minds ultimately leading to a brilliant discovery, which brings about scientific progress, which in turn is a blessing to mankind. Compared with the recent biography of Fritz Haber by Margit Szöllösi-Janze (Fritz Haber: 1868-1934, Eine Biographie, Munich: C.H. Beck, 1998), this book leaves much to be desired.

Therefore, Enriching the Earth provides a mixed balance as a history book. However, as an environmental history book, it is clearly a disappointment. To be sure, these aspects are dealt with, but always in an optimistic mode: there may be environmental problems associated with the use of nitrogen fertilizers, but one should not worry too much about them. For instance, Smil mentions the problems of eutrophication, but he concludes by saying happily that “there are many effective ways to improve the efficiency of fertilizer use and to reduce undesirable losses through better agronomic practices” (p. 197), ignoring the hot political battles that have been waged on precisely this issue. Smil also flatly recommends that sub-Saharan Africa should quintuple its nitrogen use within the next decade “in order to ensure the region’s food security” (p. 146), disregarding marginal issues like costs and agricultural practices. Smil mentions the explosion of ammonium nitrate and ammonium sulfate stored in a silo at the Oppau chemical plant in 1921 which killed 561 people, to this day the worst industrial accident in German history—but gladly adds in the very same sentence that “in spite of this setback, that year’s output of ammonium sulfate surpassed 190,000 t and in 1922 rose to 303,000 t” (p.111). And last but not least, his general tendency to provide a heroic narrative seems ill-conceived as a matter of principle. The time for heroes’ tales is clearly over in environmental history—even if the protagonist is something as inconspicuous as fertilizer nitrogen.

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