

Since the beginning of my tenure as associate editor for book reviews, I have received a great many books. This wealth of prose, poetry, and scientific exposition landing in my lap has seemed a bit like manna from heaven, given my bibliophilic predisposition. I've done my best to squelch feelings of self-conscious guilt (this is too good to be true) and, instead, have worked assiduously to catalogue at least 750 books, secure approximately 125 reviewers, and publish about 100 book reviews to date.

Within the last few years, however, I have received a number of biographies of various stripes. Most have been written about luminaries in the field of conservation. In fact, most of the books are about Americans, by Americans, published by American publishing houses. And while I knew who these people were and, in general, what their life works were about, I knew little else.

Enter Curt Meine, internationally renowned conservationist and author of an important book on the life of Aldo Leopold (1988. *Aldo Leopold: his life and work*. University of Wisconsin Press, Madison.). Last year's rumor about all these great biographies that circulated among the journal's editorial staff soon transformed into an exciting commitment for something new. Dr. Meine agreed to prepare an "occasional contribution" to the book review section that highlights the wellspring of new biographies. The choice of books and the manner of the review is solely the work of Dr. Meine. His uncanny insights into the people about whom the books are written, as well as the authors of the books, render this contribution significant beyond information about the individual biographies. It is, in fact, a profoundly thoughtful piece, worthy of reading at least half a dozen times. Therefore, it is my great pleasure to introduce the first "occasional contribution" to the journal, one that serves as a remarkable tribute to those who have gone before and as a hallmark of the society's membership.

Peggy L. Fiedler, Book Review Editor

## Bio(graphical) Diversity

**George Perkins Marsh: Prophet of Conservation.** Lowenthal, D. 2000. University of Washington Press, Seattle. 632 pp. \$40.00 (hardcover). ISBN 0-295-97942-9. \$26.95 (paperback). ISBN 0-295-98315-9.

**So Great a Vision: the Conservation Writings of George Perkins Marsh.** Trombulak, S., editor. 2001. Middlebury College Press, Middlebury, Vermont, and University Press of New England, Lebanon, New Hampshire. 248 pp. \$50.00 (hardcover). ISBN 1-58465-129-6. \$21.95 (paperback). ISBN 1-58465-130-X.

**A River Running West: the Life of John Wesley Powell.** Worster, D. 2001. Oxford University Press, Oxford, United Kingdom. 688 pp. \$39.95 (hardcover). ISBN 0-19-509991-5. \$18.95 (paperback). ISBN 0-19-51565-8.

**Seeing Things Whole: the Essential John Wesley Powell.** DeBuys,

W., editor. 2001. Island Press, Washington, D.C. 320 pp. \$27.00. ISBN 1-55963-872-9.

**Theodore Rex.** Morris, E. 2001. Random House, New York. 864 pp. \$35.00 (hardcover). ISBN 0-394-55509-0. \$16.95 (2002 paperback). ISBN 0-8129-6600-7.

**Gifford Pinchot and the Making of Modern Environmentalism.** Miller, C. 2001. Island Press, Washington, D.C. 384 pp. \$28.00. ISBN 1-55963-822-2.

**The Conservation Diaries of Gifford Pinchot.** Steen, H. K., editor. 2001. Forest History Society and the Pinchot Institute for Conservation, Durham, North Carolina. 240 pp. \$29.00 (hardcover). ISBN 0-89030-059-3. \$19.00 (paperback). ISBN 0-89030-060-7.

In 1841 Scottish essayist Thomas Carlyle famously suggested that "the history of the world is but the biography of great men." But history, one might say, has shown Carlyle's

view to be inadequate. Subsequent generations of historians have expanded history's purview, interpreting the past through the study not just of "great men," but of *people*—women, working people, the obscure and exploited, the local and indigenous, the eccentric and the special. Entire schools of history have emerged to examine the social, political, economic, cultural, and intellectual forces that give context to individual lives.

Since the late 1970s, historians have even broken through what we might call the "people barrier." Environmental history now offers a view of the past that puts people in their place, expressly exploring human interactions with climate, geology, soils, waters, plants, and animals over time. It tries to understand how the complex dance of the human and nonhuman has made the world we share. In recent years, environmental history has itself fed back into the writing of biography. "Environmen-

tal biography" has emerged as something of a subgenre, exploring individual human lives in the context of landscapes and ecosystems, seeking insight from the connections between personality and place (Meine 1998; Holmes 1999; Miller 2001).

Although history cannot be reduced to the biography of great men, or to biography in general, Thomas Carlyle was still on to something. As a narrative form, biography has special strengths. The best biographies illuminate not only their subject but also the historical circumstances that shape, and are shaped by, their subjects. By its nature, biography integrates the worlds of knowledge, belief, and experience that we inhabit. It tells the story of a fellow human being, confronting human challenges, developing human talents, fulfilling human needs. Biography allows the reader to live in another's space for a time. It personalizes the spiritual, the philosophical, and the political. It reveals the inner landscape.

Until recently, conservation figures received relatively scant attention from biographers. The subjects, mostly "great men" (and mostly men from the United States at that), were familiar figures from conservation's pantheon—Marsh, Thoreau, Audubon, Powell, Muir, Theodore Roosevelt, Pinchot—who had achieved recognition primarily as scientists, explorers, literary naturalists, or political leaders. But changes in environmental science, policy, and philosophy altered the historical lens. Early works in environmental history, such as Susan Flader's *Thinking Like a Mountain: Aldo Leopold and the Evolution of an Ecological Attitude toward Deer, Wolves, and Forests* (1974), Donald Worster's *Nature's Economy: A History of Ecological Ideas* (1977), and Stephen Fox's *John Muir and His Legacy: The American Conservation Movement* (1981), provided a new narrative backdrop against which to interpret the lives of key individuals. These and other histories provided a

broader context in which to understand conservation-cum-environmentalism as an evolving social, intellectual, moral, and political movement. The reading, and writing, of lives was bound to change accordingly.

Since the mid-1980s (coincident, in fact, with the emergence of conservation biology) the bookshelf of conservation biographies has lengthened considerably. A list of recent biographies, autobiographies, memoirs, and biographical studies of special interest to conservation biologists includes such subjects as John and William Bartram, Black Elk, John Muir, Victor Shelford, Lewis Mumford, Jens Jensen, Benton MacKaye, Aldo Leopold, Rachel Carson, Sigurd Olson, Wallace Stegner, Ian McHarg, Frederick and Frances Hamerstrom, Ray Dasmann, David Brower, Mardy Murie, Edward Abbey, and E. O. Wilson (see Bibliography). And this list includes only North Americans. The doors to the pantheon have been flung open. It turns out to have many rooms, with space for the full richness and diversity of the human story of conservation.

This windfall has brought with it, just in the last few years, a fascinating byproduct. Even as the scope of conservation-related biographies has expanded, writers and scholars have returned to the original occupants of the pantheon with different questions and new archival resources. The conservation movement in the United States still stands on the ground prepared by Marsh, Powell, Roosevelt, and Pinchot. As biographers have revisited their lives, our opportunities to reexamine and reinterpret conservation's foundations have radically increased.

David Lowenthal's *George Perkins Marsh: Prophet of Conservation* exemplifies this phenomenon. Marsh (1801–1882), the remarkable New England polymath, was overdue for a dusting off. Marsh's 1864 book *Man and Nature* (revised and reissued in 1874 as *The Earth as Modified by Human Action*) was, in Lewis Mumford's estimable esti-

mation, "the fountainhead of the conservation movement" (Mumford 1931). Yet, within a few decades, time's sediment load had nearly buried the fountainhead and its author. Through the early and mid-1900s, only the conviction of such sage thinkers as Mumford, geographer Carl Sauer, and historian Merle Curti kept alive awareness of Marsh's essential contributions. And only in 1958 did a student of Sauer and Curti finally produce a biography. That book was *George Perkins Marsh: Versatile Vermonter*, and its author was David Lowenthal.

Four decades later, Lowenthal himself decided to brush the cobwebs off Marsh. As modestly stated on its copyright page, the new volume "has its roots in but wholly supersedes the author's earlier biography." In his preface, Lowenthal explains why he decided to produce more than a mere reprint or revision. Additional primary sources have become available. Varied historical studies have enriched our understanding of the forces shaping Marsh's life. Expectations of biographies had changed. Lowenthal himself changed: ". . . As I went on, more and more of the original [text] seemed not just outdated but deeply flawed . . . I had to reconsider histories, reassess motives and outcomes, revise and reverse judgments" (p. xx). Meanwhile, our understanding of the natural world and of human environmental impacts has shifted as well. Lowenthal's first *Marsh* (1958) appeared in the predawn of modern environmentalism; his second *Marsh* appears as the ground beneath modern environmentalism rumbles. Lowenthal's resurvey of Marsh, through the connecting line of conservation, thus becomes invaluable. He has not only provided a greatly enhanced account of Marsh's life but in the process has taken the measure of changes in conservation science, environmental policy, and environmental history since the 1950s.

Marsh led an unusually rich life, with experience as a lawyer, farmer,

linguist, congressman, and diplomat, including lengthy service as U.S. envoy in Turkey and Italy. He was conversant in 20 languages and a dozen fields, from animal husbandry and architecture to history and philology. Had Marsh never turned his omnivorous intellect to the study of *Man and Nature*, his story would still merit careful treatment.

Yet it is Marsh's impact as a proto-conservationist that later generations continue to find so compelling. Without slighting in the least Marsh's other fields of interest and experience, Lowenthal keeps conservation at the core of his reworking. It grounds a book that is necessarily vast in its intellectual and geographic scope. Lowenthal's account takes us from Vermont and Washington to Constantinople and the Mediterranean, to Egypt and Palestine, to Turin, Florence, and Rome, with careful attention to the impact of these varied natural, cultural, and political landscapes on Marsh's worldview. "Marsh's greatest contribution to nascent ecological awareness," Lowenthal writes, "was to include human impacts in the dynamics of nature" (p. 284). The biography as a whole is a comprehensive, multilayered essay of all that shaped, and all that has issued from, that fundamental contribution.

Lowenthal is especially deft in placing Marsh's emerging conservation consciousness in the context of his times and ours. He succinctly contrasts Marsh's understanding of the human role in nature with that of such contemporaries as Emerson, Thoreau, and Darwin. The final chapter, "Prospect: Reforming Nature," is a careful and tightly nuanced discussion of the relevance of Marsh's work in the light of recent environmental and intellectual trends. The language of contemporary conservation is different from that which Marsh used a century and a half ago. Where we speak of ecology and evolution, Marsh wrote of nature bound by "mutual relations and adaptations." Where we see eco-

system function, Marsh saw in nature "proportions and accommodations which ensured the stability of existing arrangements." But there is no mistaking—and Lowenthal clearly demonstrates—the essential currency of Marsh's work. Marsh's *Man and Nature*, he writes, "marked the inception of a truly modern way of looking at the world, of thinking about how people live in and react on the fabric of landscape they inhabit" (p. 429).

Lowenthal's reportage of Marsh is required reading for conservationists who want to understand the deep roots of their work. Those unfamiliar with Marsh, except as an obligatory footnote in histories of conservation, may want to begin with primary sources. Marsh's prose in *Man and Nature*, dense even by nineteenth-century standards, has long impeded broader appreciation of his work. Marsh's other writings on conservation themes have been all but unavailable. Stephen Trombulak has addressed these difficulties in *So Great a Vision*, a much-needed edited collection of Marsh's conservation writings. The volume includes key selections from *Man and Nature* as well as six essential reports and lectures, introduced by Trombulak with a view toward their contemporary conservation application.

With Lowenthal's biography and Trombulak's collection, readers can finally appreciate the epic significance of Marsh's achievement, the evolution of basic concepts in conservation since Marsh first tried to frame them, and the depth of our indebtedness to "the broadest scholar of his day" (Lowenthal, p. xv).

In 1874, while at his diplomatic post in Italy, Marsh was asked by the U.S. Commissioner of Agriculture to prepare a report on the role of irrigation in the development of the nation's lands. Human uses of, and impacts on, hydrologic systems were at the heart of Marsh's critique in *Man and Nature*. Meanwhile, the post-bellum rush to the arid and semiarid territories of the American West was

in high fever. The commissioner's request allowed Marsh to apply the lessons from his historical analysis to contemporary America. Marsh's report ("Irrigation, Its Evils, the Remedies and the Compensations") recognized the potential benefits of extensive irrigation; outlined the attendant social, economic, political, and environmental costs; warned against headlong expansion of irrigation in the western United States, especially in the absence of basic hydrologic information; and recommended a series of governmental actions to protect the public interest in water.

Just 4 years later, many of the points expressed by Marsh in his report were more fully developed by John Wesley Powell (1834–1902) in the landmark *Report on the Lands of the Arid Region of the United States* (1879). Powell's treatise was, in T. H. Watkins's words, "quite possibly the most revolutionary document ever to tumble off the presses of the Government Printing Office" (p. xi). Its incendiary quality lay in Powell's view that settlement of the arid lands could ultimately succeed only if it respected the conditions of the landscape itself and ought to proceed only on the basis of thorough scientific understanding and due consideration of long-term social, economic, and political impacts. Such notions were, of course, anathema as honest settlers and dishonest speculators alike fanned out across the West in hot pursuit of land and profit. American enterprise would brook no such pause.

There is no indication in these new biographies that Marsh and Powell ever met, but they were certainly kindred spirits. Major Powell—naturalist and teacher, one-armed veteran of the Civil War, intrepid explorer of the Grand Canyon, surveyor of the Colorado Plateau country, ethnographer and anthropologist, founder of bureaus and champion of science in government—shared with Marsh a roving intellect, an innate ability to perceive landscape change on a vast scale, and a passionate commitment

to informed public resource policy. And like Marsh, Powell was nearly forgotten, until Bernard DeVoto and Wallace Stegner rescued him from obscurity in the mid-1900s. In particular, Stegner's classic *Beyond the Hundredth Meridian: John Wesley Powell and the Second Opening of the American West* (1954) resurrected Powell, making the most of the dramatic scenes, expansive landscapes, far-reaching proposals, and intense intellectual and political struggles that marked Powell's life. Stegner's book has since become an essential text, a base stratum upon which has come to rest much subsequent thought, study, criticism, and advocacy in the American West.

"Yet," writes Donald Worster, "Stegner's biography was based on limited research into its subject or the nation's development. And it laid such strong claim to Powell as Man of the West, a prophet for the arid region, that it obscured the fact that he was, above all, an intensely nationalistic American" (p. xii). Worster, one of the deans of American western and environmental history (and a recipient of the SCB's distinguished service award), has given us a wholly new and fully fleshed-out portrait of Powell. For the first time we have access to the story of Powell's early years. Worster is particularly effective in sketching the religious, cultural, and educational milieu of Powell's midwestern upbringing. Worster is likewise deeply attuned to Powell's intellectual context and connections and uses Powell's experience to demonstrate the emergence of the natural sciences as an important influence on the public mind and, increasingly, public policy. Powell's sustained interest in the languages, culture, and circumstances of American Indians plays a stronger central role than in any previous commentary.

Like Lowenthal, Worster had the challenge of taking stock of an expansive character. And like Lowenthal, Worster succeeds in part by keeping the nation's growing conservation

consciousness at the core of his narrative. In his prologue Worster writes, "Powell's story is finally one of Americans confronting and learning to live with the land they came to possess" (p. xiii). And in his conclusion Worster reiterates, "[Powell] stood . . . at the center of a change that began late in the last century and is still inching forward today, away from a careless, unplanned exploitation of nature and toward a more thoughtful, scientifically informed ethic of conservation" (p. 573). For all of Powell's contributions to American science, government, and culture, he will likely be remembered most vividly for advancing that change, focusing Americans on the links between our understanding of landscapes and our commitments to democracy.

Readers have more of Powell to take in. William deBuys has done for Powell what Trombulak has done for Marsh. *Seeing Things Whole: the Essential John Wesley Powell* is a long overdue edited collection of Powell's writings on his explorations of the Colorado River and Plateau, the arid lands and their settlement, irrigation and institutions in the American West, and the evolution of human societies. DeBuys's introductions and annotations are evenhanded and insightful, and the volume makes a superb companion to Worster's masterful biography.

There has never been, since the day he died, any threat whatsoever that history would forget Theodore Roosevelt (1858–1919). For conservationists and political progressives, in fact, Roosevelt may be working harder now than he ever did in life, desperately seeking to remind U.S. conservatives and Republican ideologues of their once strong conservation ethic. Understanding the arc of history that has brought us from T. R. to George W. Bush is one of the great incomplete tasks of this generation of environmental historians. The entire suite of new biographies (and a few others besides) will need to be brought to that task.

Edmund Morris first came upon Roosevelt in the mid 1970s. Taken with the "cinematic quality" of Roosevelt's life and personality, Morris grabbed hold of his subject, and vice versa. Starting out to write a short biography, Morris soon found that no one book could hope to contain the Roosevelt he envisioned. Morris opted to focus first on the prepresidential years. The result, *The Rise of Theodore Roosevelt* (1979), was an almost criminally readable tour de force. It became a bestseller and garnered Morris a Pulitzer Prize and an American Book Award. Invited to be Ronald Reagan's authorized biographer, Morris produced *Dutch: A Memoir of Ronald Reagan* (1999), a volume whose postmodern stylistic inventions—Morris inserted a fictional version of himself into the narrative—confused more than a few readers and brought upon him the wrath of Reagan's flame-keepers. He has not been forgiven.

With *Theodore Rex*, Morris has returned to his forte. He seems almost palpably relieved at reentering a guile-free zone. *Theodore Rex* begins in the predawn hours of 14 September 1901, with Roosevelt's ride down from Mount Marcy in the Adirondacks to his appointment with destiny in Buffalo, New York. William McKinley died in the night, and Roosevelt assumed the presidency that afternoon. *Theodore Rex* ends on 4 March 1909, with Roosevelt turning the presidential reins over to William Howard Taft. Conservation was only one of many new channels of change carved out in the intense interim. These were the years when conservation became, for the first time, a national crusade and an effective political movement.

*Theodore Rex* is not, and was not intended to be, a conservation-grounded biography in the same sense as Lowenthal's Marsh and Worster's Powell. Yet Morris's book is every bit as essential to understanding the origins and development of the conservation movement. Morris's

packed narrative implicitly reminds us that the seeds of conservation did not sprout in a gentle medium, but were cast amid churning political circumstances. The reader is struck how Roosevelt's scientific credentials and conservation instincts provided necessary cover for his innovative policies during such volatile times.

Although matters involving the early conservation movement must vie in *Theodore Rex* with a hundred other storylines, Morris plainly reserves special sympathy for T. R.'s conservation accomplishments. Perhaps 15 pages (out of 550) focus on conservation topics: forestry; reclamation; Roosevelt's 1903 western tour (including stops at Yellowstone, Grand Canyon, and California's redwood country, and at Yosemite with John Muir); Roosevelt's relationship to Gifford Pinchot; the declaration of the "midnight reserves;" the May 1908 governor's conference on conservation. These familiar themes and scenes gain fresh poignancy when placed in the hurly-burly of Roosevelt's daily presidential schedule. Morris picks up on the "new protective sensibility" that comes over Roosevelt as he returns to the Yellowstone country he first saw in 1886. It inspired Roosevelt to describe the effort to protect "wild life" and wilderness as "essentially a democratic movement" (p. 221). When Roosevelt stands for the first time, with full entourage, at the lip of the Grand Canyon, he was, in Morris' words, "powerfully affected": "I don't know exactly what words to use in describing it. It is beautiful and terrible and unearthly" (p. 225). In his penultimate paragraph Morris surmises that, while formal memorials were being planned even as Roosevelt left the presidency, for millions of his fellow citizens Roosevelt was "already memorialized" in the native landscapes, natural wonders, and wild creatures he had safeguarded through his actions as chief executive (p. 554).

In interviews, Morris has allowed that he has difficulty reconciling

Roosevelt's lusty hunting exploits with his conservation passions—a difficulty he shares with many who, in working their way back to Roosevelt, have to break through the time horizon of latter-day environmentalism. How Morris finally deals with this will have to wait for the third volume of his trilogy, which will begin with Teddy heading off to Africa on safari. Even more important, however, will be how Morris walks us through the tumultuous Pinchot-Ballinger battle and the momentous split it precipitated in the ranks of the Republican Party in 1912. In the telling of that story we may finally begin to understand more clearly just how, when, and why the chasm between conservationists and conservatives began to open.

One episode that did not make it into *Theodore Rex* was the early wrangling during Roosevelt's administration over the fate of the proposed dam at Hetch Hetchy Valley in Yosemite National Park. The story of the Hetch Hetchy conflict has long been a staple of environmental history. It has come to signify the first great battle of the conservation paradigms, with the two main protagonists—arch-preservationist John Muir and arch-utilitarian Gifford Pinchot—wrestling for the soul of the movement and T. R.'s conservation conscience. The eventual construction of the dam has come to represent the initial triumph of utilitarian conservation, with Pinchot assuming the role, not so much of chief forester to President Roosevelt, but chief pragmatist among the progressives.

It is a characterization—a caricature—that Char Miller rejects and seeks to correct in *Gifford Pinchot and the Making of Modern Environmentalism*. Pinchot (1865–1946), like Marsh and Powell, has long been in need of more careful scholarly attention. Pinchot's own autobiography, *Breaking New Ground*, published in 1947, is of the must-read-but-keep-your-grains-of-salt-handly variety. Two biographies, published in 1960 (McGeary) and 1970 (Pinkett),

broke little new ground themselves in reinterpreting Pinchot. Meanwhile, Miller argues, Pinchot's legacy has been simplified, disparaged, and frozen in time by environmental scholars, historians, and advocates too much in the thrall of Muir's wilderness preservation ethic. Miller's biography is a forthright effort to amend this view of Pinchot. In place of the environmentalists' straw man (and, one might add, the Wise Use movement's misappropriation), Miller offers a life of Pinchot that "demonstrates the evolution of a complicated set of perspectives" (p. 8). Many of these perspectives, Miller suggests, find clear resonance in modern environmentalism.

Miller makes his case along several lines. He asks readers to consider the entirety of Pinchot's career, not just the few short years he served as Roosevelt's chief forester and conservation advisor. He draws the reader's attention to Pinchot's two terms as a progressive governor of Pennsylvania, during which he fought on behalf of workers, rural voters, women, and children against the "gang politicians" in Pittsburgh and Philadelphia. Far from separating his politics from his forestry, Pinchot "early on recognized that the conservationist ethos must oppose social discrimination and economic inequality," a conviction shared by his dynamic wife, Cornelia Bryce Pinchot (p. 8). Throughout his career, Pinchot also called attention to the worldwide scope of conservation. At a time when few others were thinking globally, Pinchot sought international agreements to promote improved resource stewardship. In this confluence of interests, he closely anticipated the modern thrust toward sustainable development.

Miller gives special consideration to the evolution of Pinchot's approach to forestry. He shows that, to at least some degree, Pinchot's view of forestry changed between his heyday in the U.S. Forest Service and the 1940s; that it became more inclusive of ecological principles and

values that, in Pinchot's own words, "cannot be measured in board feet and cords, in dollars and cents" (p. 338). As governor, Pinchot established one of the nation's first state pollution control agencies, revitalized Pennsylvania's forestry program with a focus on restoration, raised his voice against the devastation of private forest lands, and acted to protect Pennsylvania's old-growth remnants. If Pinchot never quite fully embraced a biocentric forestry—in *Breaking New Ground* he was still speaking of forestry as "tree farming" and forests as "the most useful servant of man" (pp. 31, 32)—he was nonetheless moving toward a more holistic and integrated view of forests.

These changes, Miller contends, reflect a much broader sympathy with the natural world than Pinchot is normally credited with or than historians have cared to look for. Far from being immune to awe, Pinchot could be deeply moved by the power of wildness and was willing to be an advocate on its behalf. Miller recounts, for example, Pinchot's 1929 visit to the Galapagos Islands, where destruction of the islands' fauna was proceeding rapidly. In his book *To the South Seas* (1930), Pinchot recommended the "setting aside of several islands as wild life refuges, just as we have done so successfully in the Yellowstone National Park and elsewhere at home." Although there was no clear mechanism to achieve such a nakedly preservationist goal, Pinchot firmly asserted that "somehow it ought to be done" (p. 302). Charles Darwin and John Muir would no doubt have signed the petition.

Miller's biography is less sweeping than the others, more narrowly focused on the author's goal of encouraging readers to reconsider the Pinchot they thought they knew. As such, it invites greater attention to a relatively neglected period in conservation history, the interwar years, when ecological science first began to modify the economic basis of conservation, when political leadership

in conservation shifted from progressive Republicans to New Deal Democrats, when conservation took its first tentative steps onto the international stage. Miller does not claim that Pinchot could be called a modern environmentalist or that Pinchot finally arrived at a happy reconciliation of conservation's sometimes conflicting goals and motives. Miller nicely summarizes his thesis: "[Pinchot's] legacy lies in his *greening*, in his deliberate effort to reach an ever more complete understanding of the tangled interactions between the civilized and the wild. In this, he represents nothing less than the ever-widening range of strategies available to Americans, from the nineteenth century to the present, who were and are concerned with the maintenance of a healthy and peaceful world, and who have sought and continue to seek ways to bring that more benign state to life" (p. 376). Miller may not convince all environmentalists with this thesis, but he has restored to Pinchot the dimensionality that environmentalism has deprived him of for too long.

Harold Steen, the Pinchot Institute for Conservation, and the Forest History Society have also produced *The Conservation Diaries of Gifford Pinchot*, a compilation of selected diary entries stretching across much of Pinchot's adult life. Organized around key episodes involving forestry and conservation, these short entries provide further insight into Pinchot's persona and his effectiveness. Pinchot was not an introspective diarist, and these passages do not serve as revealing windows into his inner life. What they do offer, however, is a direct view of Pinchot's work, a sense of his broad political connections, and nuggets of new and valuable information. From the entry for 5 November 1906: "T. R. said, among other things, that if I had been from a Rocky Mountain state he would have put me in as Secretary of the Interior long ago" (p. 140). (And had T. R. done so, conservation history would have

looked very different). This is inside baseball, but for baseball fans that's the best part of the game.

The lives featured in these biographies and revealed in these writings lay like dominoes across the panorama of American conservation history, stretching from 1801 to 1946, from Jefferson to Truman, from the Louisiana Purchase to Levittown. Taken in toto, they reconfigure our understanding of the bedrock upon which conservation and environmentalism have been built. They complicate any notion that there has been a simple or unified progression from ecological ignorance to effective action. They demonstrate abundantly that conservation, far from being a mere "sign of personal virtue" (as some have recently put it), is a cultural movement with deep and abiding roots in Americans' experience of their landscape. They show the American conservation movement as a continual, irrepressible counterpoint to the dominant strain of exploitation and carelessness. They remind us utterly of the hard work that has come before.

When these lives are considered together, constant themes emerge. Marsh, Powell, Roosevelt, and Pinchot were essentially people of high faith, optimistic about the capacity of the American citizenry to use knowledge, through democratic processes, to benefit society as a whole. All were committed to public service and to the public good, within government and beyond. All held the natural sciences in the highest regard, and through their efforts secured a place for science in the crafting of public policy. They were themselves intellectually curious to an unusual degree, yet each married the life of the mind to lives of action. As knowledge of the human impact on natural objects, systems, resources, and processes became ever clearer, each strove to reconcile human institutions (especially the organs of government) with environmental realities. These were pragmatic

men, primarily utilitarian in their outlook, burdened with what Donald Worster calls “unresolved conflicts” in their thinking (p. 507). Those uncertainties did not deter them. They all contributed to a new synthesis of values that aimed to safeguard nature’s capacity for self-renewal and to secure for the long term the full range of material and spiritual benefits provided by the American land.

If we cannot quite think of these men as primarily social reformers, we find in all these lives a complicated, evolving sensitivity to social, ethnic, and racial relations. We also find an ongoing effort to marry emerging ecological insights with social, economic, and political change. Together these figures contributed vitally to the American progressive political tradition, contributions that have for too long been overlooked and forgotten. We are fortunate that some of our generation’s leading historical scholars have provided these much-needed reminders.

Whatever else conservation may be—whatever else members of this and other professional organizations may help to make it—conservation will always be, first and foremost, a complex human story. Beyond the field adventures and the data sheets, the midterms and deadlines, the rapid responses to some ill-advised proposal or promising opportunity, the intra-agency struggles and extramural commitments, are people following the dictates of conscience, curiosity, program requirements, job descriptions, mission statements, higher-ups, and requests for proposals. Biographers are interested in how people respond, how they assimilate experience and knowledge, how they become who they become. It is a sign of success that conservation has come to depend less on the achievements of “great men” and more on the day-to-day work of communities, institutions, landowners, resource managers, teachers, administrators, everyday citizens. However, there is still abundant value, pleasure, and insight to be

gained by looking into these remarkable lives and finding in them reflections of our own. In telling these lives, we conserve the human story, even as we work to conserve life.

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## The End of the Grazing Debate

**Welfare Ranching: the Subsidized Destruction of the American West.** Wuerthner, G., and M. Matteson, editors. 2002. Island Press, Washington, D.C. 368 pp. \$75.00 (hardcover). ISBN 1-55963-942-3. \$45.00 (paperback). ISBN 1-55963-943-1.

**Ranching West of the 100<sup>th</sup> Meridian: Culture, Ecology, and Economics.** Knight, R. L., W. C. Gilgert, and E. Marston, editors. 2002. Island Press, Washington, D.C. 280 pp. \$50.00 (hardcover). ISBN 1-55963-826-5. \$20.00 (paperback). ISBN 1-55963-827-3.

The grazing debate is over, at least from any intellectual perspective, and we have the folks at Island Press to thank—whether or not they intended it. By bringing out two apparently contradictory books on the same subject, in the same year, they have staged a kind of battle royal. One side attacks public lands grazing so incoherently and disingenuously as to discredit its position once and for all, whereas the other persuasively shows that “the debate” is in fact part of the problem. The loser, in the end, is the simple-minded notion that conservation of biological diversity on western rangelands can be reduced to the issue of federal grazing policy. The land, its inhabitants, and its problems are too diverse for that.

*Welfare Ranching* is a product of the Foundation for Deep Ecology, which apparently funded both its creation and its publication. (Island Press describes itself in emails as merely the distributor of the book, although its name anchors the title page.) More than a board foot in size, it is really a coffee-table book, dominated by Mr. Wuerthner's photographs, all but a few of which fall into one of two groups, “cow-damaged” or “livestock-free.” These are the only terms, it appears, in which the book's editors understand rangeland ecology.

The photographs are dramatic, of course, and they may be persuasive to audiences unfamiliar with the subject. But are they credible? In this case, there is reason to suspect they are not. Of the six photos of areas with which I am familiar, four involve gross errors of fact or interpretation or are seriously misleading. I will give just two examples here. In one, a photo purporting to show veg-

etation grazed “down to dirt” (p. 90) in fact shows an area where bear grass (*Nolina microcarpa*) had been harvested by nonranchers for use in broom production. In another, the caption for a satellite image of the Buenos Aires National Wildlife Refuge boundary (p. 165) misidentifies both which side is which and ownership of the nonrefuge side. It then offers a contorted and spurious interpretation of the contrast. Whether the other photos in the book are equally prone to error, I am not in a position to judge. But it is clear that every effort has been made to find scenes where cows coincide with apparently damaged land, without bothering to look into the details.

In the text of *Welfare Ranching*, science is strongly invoked but weakly represented. Literature citations are abundant but highly selective. Of the book's 40 essays, only 6 are by scholars, and most of these only restate findings previously published in peer-reviewed journals. Individually, the essays range from cogent (e.g., Carl Bock's on birds) to utterly ridiculous (e.g., the editors' on “The Iron Pentagon,” a conspiracy theory in the worst sense of the term). Collectively, they are a frustrating read. Many have a single-species focus, and the editors fail to synthesize the various strands into a coherent whole. The volume is rife with redundancy, as each author rehearses every possible anti-livestock argument related to his or her topic. Contradictory arguments are common between essays; for example, one insists that ranches would adjust and persist if stripped of their grazing leases (p. 267), whereas the next suggests that ranches would default on billions of dollars in loans (p. 272).

Ostensibly, the book advocates ending range livestock production on Western public lands, but the target of the argument shifts constantly. In places it expands to include activities on private lands (e.g., feedlots and crop production), dams, water projects of all kinds, U.S. livestock production (and consumption)

generally, and even arid and semi-arid pastoralism anywhere in the world. Many of these activities are indeed interrelated, but removing livestock from public lands will not address them all, and it may make some of them worse than they are now. For example, frequent reference is made to the statistic that only 3% of U.S. livestock feed comes from Western public rangelands. Yet on the subject of water pollution, the book cites figures for the entire national herd's waste production—and conflicting figures at that (pp. 191, 196). Does the manure not come out near where the feed went in? Perhaps the major water pollution problem comes from the feed, much of it grains, fed to confined animals—which would only increase if the book's platform were enacted.

Most crippling to *Welfare Ranching's* argument is the asymmetrical way it evaluates land uses. The “ecological” essays ask only about the presence or absence of livestock, as though no other constituency seeks to (or already does) use the lands of the West in competition with ranching. In the “economics” section, however, competing land uses suddenly appear as evidence of ranching's insignificance. Thomas M. Power's essay, for example, makes its case purely in terms of income. Thus, if a ranch is the only use of an area made up of public and private lands, the economic importance of the public forage is high; but, if non-ranchers move in and build houses on some of the private land, the value of the public forage declines in proportion to the newcomers' income contribution to the area's economy. This may be how politicians view the world, but Power's statistics amount to a self-fulfilling apology for subdivision, with no regard for ecology. Back in the ecology section, meanwhile, a study is cited because it found grazing to be the fourth-greatest cause of species endangerment in the United States (Flather et al. 1994). No mention is made, however, of that study's other

findings: that residential and industrial land development is the third-greatest cause of species endangerment, for instance, and that the public lands are insufficient by themselves to conserve endangered species.

In short, *Welfare Ranching* presupposes and encourages ignorance in its audience. Nowhere is this more blatant than in its ultimate “ecological” argument, namely, that the intermountain West is unsuited to grazing because it lacked large grazers over most of the past 10,000 years. That the evolutionary history of grasses is roughly 4000 times longer than that and that grazing-adapted grass species are in fact native and present in the area are facts the editors either do not know or do not wish to mention. In terms of ecological theory, the book is mindlessly Clementsian, transfixed by the notion that rest equals restoration. By its sloppy editing, selective consideration of facts, meretricious photographs, and general intellectual disingenuousness, the book discredits its own position and its editors, if not its contributors as well. It is neither deep nor ecological.

*Ranching West of the 100<sup>th</sup> Meridian* is the outgrowth of a conference organized by two wildlife biologists and the publisher of the environmental newspaper *High Country News*. It consists of 17 essays by ranchers, writers, riparian restoration experts, employees of The Nature Conservancy and the American Farmland Trust, and professors of biology, geography, and natural resources. The professors are confident but understated in their scholarship, and the book as a whole does not seek to overwhelm the reader with “facts” but to encourage a kind of informed reflection. Ten essays include no references to other sources, several are more personal and literary, and each of the book’s five sections begins with a poem. Photographs and other figures are minimal, although effective.

*Ranching West* does not deny the damage done by excessive, ill-man-

aged grazing throughout the West; it does not dispute that ranching, along with the rest of agriculture in the United States, benefits from public subsidies; and it does not plead for regulatory relief, property rights, or devolution of federal lands to states or counties. Rather, it approaches the issue of Western ranching from the observation that “At both ends of the spectrum, far left and far right, we find a degree of intransigence that is paralyzed by orthodoxy” (p. 17). Antigrazing activism is not really leftist, but the point is well taken: “pristine” nature versus “pure” property rights has reached a political stalemate, a hyperbolic impasse that has not offered much in the way of practical solutions to the problems of the Western range.

With a handful of well-supported facts, the book quickly exposes the myopia of obsessing about public lands in the manner of *Welfare Ranching*. In the eight intermountain states, about half the rangeland is privately owned, and almost one-third—roughly 100 million acres—is private land tied to federal grazing permits. Throughout the region, rapid population growth and rising per capita land consumption are driving the conversion of agricultural land to subdivisions at rates of hundreds of thousands of acres per year per state (pp. 25–27). Given that private lands tend to be located where there is more water, more fertile soil, and a longer growing season, the potential impact of this trend on biological diversity is staggering (cf. Scott et al. 2001). Wuerthner and Matteson dismiss this as “myth,” but anyone who lives in the region need only look around to witness it.

Ecological studies of subdivision are regrettably scarce, and *Ranching West* chooses other means to convey what is at stake: the complexity of the Western landscape and its ecosystems, including the fabric of its human culture. Eschewing the worn-out tropes of the mythologized cowboy and the moralism of the extremists, the book gives voice to a

new and refreshing perspective on the West, one that values nature and culture, art and science, people and wildlife, public and private lands. In a couple of places the prose gets a bit purple, and some scientists may object to the essay by Allan Savory, whose claims about animal impact and “over-rest” have not found much experimental support. But most of the essays are very well written, and it is at least clear, by the end of the book, that simply removing livestock is neither necessary nor sufficient for conserving biodiversity on western rangelands. The belief that rest will restore rangelands “is nearly a century old,” Richard Knight notes, but it “has seldom proved to be the solution” (p. 127).

What’s over, then, is not debates about grazing (and water, and land use, and wildlife habitat), but *the* grazing debate, with its implication that one solution can be found and imposed, top-down, across the West’s immense and varied lands.

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#### Culture, Ecology, and Policy in the Old and New West

**Species of Capital: Ranching, Endangered Species, and Urbanization in the Southwest.** Sayre, N. F. 2002. The University of Arizona Press, Tucson. 320 pp. \$48.00. ISBN 0-8165-2158-1.

The history of ranching and resource use in the American southwest is a time honored-tradition in environmental writing, with numerous influential contributions ranging from the writings of Stegner (1954) to more recent contributions by Bahre (1991) and Remley (2000). In *Species of Capital*, Nathan Sayre demonstrates that a historical context is as relevant as ever to understanding current environmental issues. Sayre uses the detailed history of one landscape—southern Arizona's Altar Valley and the Buenos Aires National Wildlife Refuge—as a powerful metaphor for understanding how the interaction of culture, conservation, and science and their socioeconomic processes structure ecological systems.

To set the stage, the book begins with a history of the conservation of the endangered Masked Bobwhite (*Colinus virginianus ridwayi*), which represents a microcosm of the many follies of single-species management, and the socioeconomic context in which it is imbedded. In the next several chapters, containing one of the finest histories of ranching and resource use, Sayre expands the discussion to reveal the land-use context within which the Masked Bobwhite exists. Starting with the cattle boom of the late 1800s and continuing through the transitions in landscape composition of the late 1900s, Sayre examines how economic systems structure ecological systems by demonstrating that the two big epochs of environmental change in the West, the cattle boom and the real estate boom, were both largely driven by the speculative influxes of capital. This is perhaps the most crucial contribution of the book because it poignantly illustrates the need in solving environmental problems to avoid focusing on issues such as livestock grazing or subdivision as isolated events, but instead to consider them within the context of the larger socioeconomic processes that frequently drive environmental change. Other important subtexts to

the story include a detailed history of the evolution of range management in the Southwest and the significance of the ideas of ecologist Frederic E. Clements, the development of state trust lands, and the role of changes in beef marketing and packing in the economics of ranching and its indirect effects on Western landscapes.

Following the initial overview, Sayre focuses on the last 30 years, in which the Buenos Aires ranch shifts from a speculative real estate investment to a federally owned national wildlife refuge. This section links the twin forces described in the initial sections of the book, the culture of endangered species conservation and the socioeconomic process that lead to the New West. Although Sayre's effort at a synthesis between "ranching, endangered species, and urbanization" is admirable, I found that this portion of the book failed to meet the standards set in the preceding sections. The initial transition chapter, "Producing a State of Nature," does an admirable job of setting the stage for the environmental and social changes that led to the formation of the refuge, and it contains a wonderfully succinct review of the ecology of fire in desert grassland ecosystems. But the following chapter, "Where Wildlife Comes Naturally," never attains the level of integration and clarity achieved in earlier portions of the book. For example, whereas seven pages are devoted to discussions of sign use on the refuge, largely missing is a broad synthesis of wildlife policy (e.g., Tober 1981, 1989), or reference to the importance of the legal framework of the U.S. Endangered Species Act, and detailed discussion of federal wildlife law (e.g., Bean 1983). This represents a significant problem because without a detailed review of the social and legal framework of federal wildlife policy, it is hard to put events on the refuge, and the actions of refuge managers, in a meaningful context (e.g. Curtin 1993).

In the closing chapter, "Counterfeiting Conservation," Sayre returns

briefly to the themes of the introductory chapters with a synthesis of the underpinnings of landscape change. Although there is a passing reference to the work of Swetnam and Betancourt (1998) and a review by McPherson and Weltzin (2000), Sayre never really grapples with the impacts of climate or addresses the current role of environmental change in the Southwest. A more detailed discussion of current ecological research in the Southwest would have provided a stronger foundation for Sayre's critical review of refuge policy. As it was, I found myself wondering to what extent refuge policies were inherently flawed or instead the unfortunate outcome of recent climatic patterns (e.g., Swetnam & Betancourt 1998; Curtin & Brown 2001).

While *Species of Capital* contains one of the finest syntheses of the interaction of cultural, economic, and ecological forces in structuring the landscape of the Southwest, at the same time it falls short of delivering a synthesis of "ranching, endangered species, and urbanization." This is because the discussions of wildlife policy lack the clarity and depth achieved in the initial sections of the book on ranch and range management, whereas the final discussion of current ecology and policy lacks the documentation needed to make Sayre's arguments completely credible. Although these shortcomings undermine what is otherwise an important and innovative synthesis, *Species of Capital* is well written, thought-provoking, and well worth reading for anyone interested in ranching, the West, or environmental history in general.

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## Individual Greed and Public Goods

### Government vs. Environment.

Leal, D. R., and R. E. Meiners, editors. 2002. Rowman and Littlefield Publishers, Lanham, MD. 224 pp. \$75.00 (hardcover). ISBN 0-7425-2180-x. \$28.95 (paperback). ISBN 0-7425-2181-8.

The U.S. government has been a major player in environmental destruction. The U.S. Army Corps of Engineers has dammed and straightened rivers and drained wetlands, including the Everglades. The U.S. Forest Service has suppressed fires, built too many roads, and overcut forests.

To increase the numbers of deer and songbirds, federal bounties and control agents have been used to reduce predators: grizzly bears, wolves, mountain lions, and even eagles, hawks, and falcons. Federal management of ocean fisheries has not sustained yield. Many of our national parks have become overcrowded and overbuilt. And of course the United States is a key player in the activities of the World Bank and other agencies that promote inappropriate development abroad.

*Government vs. Environment* elaborates the sins of federal resource management in convincing detail. In 10 chapters plus a prologue, the editors and six additional authors make a convincing case that our environmental problems do not arise simply because markets do not adequately channel individual greed to the public good. In a short prologue, the editors point out that environmental problems most frequently have been characterized as failures of the market, situations where some are able to impose costs on others without compensation through the market. Market failure suggests government intervention to correct the problem or to manage the environment directly. However, comparable systemic failure exists in the public sector. Special interests disproportionately affect political and bureaucratic decisions. Good decisions made in Washington, D.C., rarely look so good when they have to be carried out under widely differing conditions in the field. Agencies stubbornly pursue historic management practices long after developments in scientific understanding and empirical evidence have shown that they lead to bad results. And the absence of economic incentives leads to too little protection in some areas and too much with too little to show for the expenditures in others. In short, it is not only markets that fail; government fails too.

According to the editors, too much attention to market failure and

too little attention to "government failure" in environmental management have led to an overemphasis on federal solutions. Had we considered government failure as well in the past, we would have chosen less government intervention. The 10 chapters that follow document how government policies have failed to protect the environment because of the use of inadequate science, the ways in which special interests influence government to work against the public good, and bureaucratic arrogance and power not subject to competitive pressure to produce results as in the market.

In chapter 3, Donald Leal makes a fairly strong argument that government management led to the collapse of fisheries because bureaucrats responded to the short-run interests of their constituents rather than the longer-run health of fisheries. Indeed, fisheries management is now shifting toward privately held, tradeable fish quotas, though still with government oversight, because of the dismal historical performance of the use of annual quotas supposedly scientifically determined by bureaucrats. Chapter 7 by Holly Fretwell makes a similar argument that the public forests were overcut because of lumber industry pressures. She also, however, engages in a tirade about the forests being locked up under the guise of ecosystem management. Clearly, government resource management has not met the mandate that renewable resources be managed so as to be available for future generations.

Chapter 6 documents the federal war on predators, historically supported by scientists including Aldo Leopold and by the National Audubon Society, and supported by deer hunters to this day. Grizzly bear and mountain lion obviously were dangerous to settlers in the West and so bounties were put on them. In 1914 Congress charged the "Biological Survey" with the task of eliminating wolves, coyotes, and other preda-

tors that threatened livestock. Federally managed wolf kills took place in Alaska into the 1970s to protect caribou, and when the federal government got out of this business, the state of Alaska stepped in. And to this day, ranchers who want assistance with pesky predators can call upon the “wildlife services” division of the U.S. Department of Agriculture for help. Some individual animals can be in the wrong place at the wrong time, and their removal may be the only solution, but this chapter documents that historically we went far beyond this restraint and that there are still contradictions today.

One of the chapters rings hollow. In chapter 2, Roger Meiners and Andrew Morris argue that international restrictions on the use of DDT, caused by excessive concern by environmentalists in the United States, have made malaria control costly and difficult around the world and have resulted in countless lives lost. They assert that, whatever the environmental gains from restricted DDT, they are not worth the lives lost in the developing world. They fail to mention that DDT was abandoned around the world largely because of the development of resistance, although they do offer an endnote indicating that some argue that resistance occurred and may have been a problem. No doubt, in a world in which everyone looked out for everyone else’s interests and used DDT carefully, the use of some DDT would be rational. Somehow, the idea that such appropriate use could occur among poor, frequently illiterate, people in developing countries is hard to fathom.

Complaints of federal abuse of the environment are many in this book, but the authors make no suggestions as to how federal management might be improved. This is not a part of their agenda. The editors make it very clear in chapter 1 that they would rather see the federal government get out of environmental management altogether. They as-

sert that we would be better off if individual (and corporate) rights to the environment were clearly specified and individuals (and corporations) had clear rights to redress in the courts when their rights are violated. They call for the rule of law, not of bureaucrats. The first chapter concludes as follows:

Under national command and control of the environment for three decades, the central government has assumed astonishing power over environmental assets—land, water, and air—so that not much of our world is left out of current or potential control of politicians and the bureaucrats who work under their control. We have become much like serfs in medieval England . . . . We are allowed to occupy land and pay taxes on it at the whim of our lords. They can impose so many restrictions on our land that it can become more sensible to abandon it than to try to retain possession. This entails a huge loss of personal freedom, the destruction of economic value, and, of course, dreadful consequences for the environment. (p. 11)

In short, this is an attack on government from a strongly libertarian perspective that favors minimalist government, one that provides national defense, a fixed legal framework, and courts in which people can defend their rights.

Can a libertarian world view accommodate the way conservation biologists are increasingly coming to understand ecosystems and biodiversity protection? I think not. The argument is fairly simple. Had we established long-term rights to use public lands based on what scientists knew a century ago, predator control and fire suppression would have been established in the law. As our understanding of environmental systems has developed, rules for environmental use must change. Furthermore, our tastes change. A century ago, few of our parks and little of our wilderness had been designated, and these lands would have been opened up to private use be-

fore the demand for parks and wilderness had become well established. The call of libertarians—for fixed rules, for an end to all of this collective thinking and rethinking of how we should interact with our environment and consequent new rules, and for letting individuals and corporations just do their thing without government interference—is inconsistent with scientific progress and changing tastes.

*Government vs. Environment* is one of several dozen volumes over the past decade in a series sponsored by the Political Economy Research Center (PERC) in Bozeman, Montana. The PERC also refers to itself as The Center for Free Market Environmentalism. The scope of their activities and libertarian philosophy are elaborated on their website: [www.perc.org](http://www.perc.org).

An antidote to this libertarian literature can be found in the work of another Montanan, Daniel Kemmis, a political historian and politician who lives in Missoula. Kemmis also argues against federal resource management while making a plea for active local collective control within broadly defined national goals. As a communitarian, quite the opposite of a libertarian, Kemmis believes people care about each other, the land, and their children’s futures. He believes people learn from one another in the political process. And he argues that democracy needs to be revitalized around these human strengths. Daniel Kemmis is also one of the best writers of the Mountain West. I recommend Daniel Kemmis’s *This Sovereign Land: a New Vision for Governing the West* (2001. Island Press, Washington, D.C.), whether or not you explore any of the books from the Political Economy Research Center.

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## Where the Wild Things Are

**The World and the Wild.** Rothenberg, D., and M. Ulvaeus, editors. 2001. The University of Arizona Press, Tucson. 250 pp. \$19.95 (paperback). ISBN 0-8165-2063-1.

Have you ever wondered what the word *wild* means? Webster's Dictionary (1966) defines it as (1) "living or growing in its original, natural state; not domesticated or cultivated" or (2) "not lived in or cultivated; desolate; waste," among other definitions. These definitions are broad, as is the discussion of wildness in this edited book. The word *wild* can mean different things to different people, and David Rothenberg and Marta Ulvaeus have gathered an eclectic group of people to address the concept of wildness and what it means to them. Depending on the various viewpoints, we are subject to many ideas about the word *wild*.

The book is based on a collection of essays first assembled as an issue of the journal *Terra Nova* (volume 3, number 3) in advance of the Sixth World Wilderness Congress. One of the goals of the conference was to help decide how humanity should relate to wildness in the natural world. The reason for this focus was the desire among many to view wildness in a less selfish state, which is perceived as the dominant view by many in the West. Because wild places have been besieged by those who consider them only in terms of their potential use, there is growing concern and need to consider these places in other terms. Whereas western thought has promoted a separation between humanity and nature, several of the authors try to view wildness in a more holistic way. They hope that by doing this the wild places will be saved. This anthology's goal is to give new meaning to the word *wild* and to discuss saving wilderness "beyond the usual futile polarities" (p. xx). The idea is that the concept of wilderness must

change so that it is relevant to many cultures. The book falls short of its goal, in part, because there is no synthesis of what the authors have provided the reader; however, it is an interesting read for other reasons.

This collection of short articles addresses the concept of wild through a set of narratives or stories, not scientific chapters. The contributors include a professor of English, a park ranger, an ethnobotanist, an indigenous community leader, a philosopher, and a journalist. Each contributor speaks with a different voice, so the chapters may appear a disjointed suite of essays, but three themes emerge from a reading of the book. First are those chapters that use case studies to show that only by linking people and resources can wilderness be fought for. Second, there are those who advocate top-down approaches, in which wilderness preserves are necessary and people are kept away. Third are the chapters written by storytellers about their experiences in and with the wild.

Linking humans and the wild is the subject of chapter 1, where Parajuli, using case studies from Nepal, describes the mainstream notions of wildness and wilderness as primarily products of industrial economies and Cartesian rationality. This reductionist approach to the nature-culture divide implies a severing of the emotions and spirituality that people feel toward the environment. For Parajuli, the idea that the wild should be preserved beyond the touch of humans is untenable, especially in Southeast Asia. He refers to people who have developed a respectful use of natural resources as possessing an "ecological ethnicity" (p. 5). Similarly, in chapter 3 Sarkar calls what people who live in traditional societies do "social ecology" (p. 39), in which human living patterns and the natural world are inextricably intertwined. He contrasts this to the western model of humans and the environment as separate, which is the core of the model of biological conservation. He traces the history

and legislation associated with biodiversity and conservation and, using India as an example, explains the need for conservation with a human face. Brazilian conservation is the focus of chapter 12, in which Diegues describes the dominant view of conservation as one that privileges natural areas that appeal to a Western aesthetic. He criticizes this approach from the perspective of "peasant ecology" (p. 159), in which traditional societies are accorded a prominent role in maintaining the wild. Finally in this group, David Western (chapter 5) tells the story of trying to save the Amboseli ecosystem of southern Kenya for both pastoralists and wildlife.

In contrast, Cafaro and Verma (chapter 4) call for habitat preservation and restrictions on human economic use of resources, particularly under conditions where extinctions are imminent. They argue that human interests sometimes have to be sacrificed to solve some conservation problems. This does not mean the plight of the poor is ignored. They acknowledge that social injustices do occur, but they do not apologize for "taking resources away from more pressing issues" (p. 63). Another person who advocates top-down regulations mandating nature preservation is Terborgh (chapter 6), who points out the drawbacks to integrated conservation and development projects. He believes that the focus on people and their economy around parks and other protected areas is the wrong one. The focus should instead be on the protected areas and their natural resources. In chapter 7, Terborgh and Western agree to disagree. Their short exchange demonstrates the differences between the bottom-up (Western) and top-down (Terborgh) approaches to conservation.

The final set of essays covers extremely diverse topics. Considering the likes of Lewis and Clark and Thomas Jefferson, Papanikolas (chapter 2) describes how each dealt with the imaginary land of the American

West. Lewis and Clark, men of science, went to measure, observe, and draw. Jefferson, possessing the "Light of Reason" (p. 26), sent soldiers west with medals and gifts to displace the Indians. Despite the romantic longing for unspoiled nature, it was in fact being ravaged.

Several accounts are personal. In chapter 8, Player tells a powerful story of how a Zulu taught him about the interactions of the flora and fauna of the domain he presided over as warden of a game reserve in South Africa. Magqubu's knowledge of the environment is astounding. In chapter 9 Bevis tells of the exploits of Bruno Manser, a Swiss man who lived with the Penan, "the wild men of Bornea" (p. 109) (where were the women?) and how he came to help them enter the "modern" world as theirs was invaded and deforested. Chapters 10 and 11 seem to fit least well into the general theme of the book. Harrison, living and working with the Mazatec Indians of Mexico, describes their medicinal and spiritual use of plants. Vanderbilt describes what various groups (volcanists, urbanites, and local farmers) think and feel about Popocatepetl, the volcano that sits on the outskirts of Mexico City. In chapter 13 Imhoff describes the struggles of his father-in-law, Doug Tompkins, to preserve a wilderness in Chile. The founder of North Face and Esprit clothing empires left that the business world to try to "avert a future void of wild places" (p. 183). Arabagali, a community leader on Papua New Guinea, tells us in chapter 16 what happened to his people and the land after white people arrived in the 1960s. A community that once lived in harmony has broken down. "Earth Jazz" is the title of Eisenberg's chapter (15), in which he states that we need to move from a visual perception of nature to one of sound. That model for our collaboration with nature could be a kind of "earth jazz" (p. 200), through which we learn to improvise and respond flexibly. Our science and our

lifestyles are rigid, but we need to encourage diversity and flexibility at any time.

I end with Whitesell's essay (chapter 14) because his is a synthesis, and I agree with him. He views *wild* as the "quality of freedom from human control" whose "geographic expression is wilderness" (p. 187). There are, however, various degrees of control over different wilderness. We must make choices about the extent of human control over a wild area, which by definition is no longer wild when managed. And there are few wild areas left on this planet. What this chapter and several of the others demonstrate is that the road to wilderness and biological conservation is a hard one. There are no longer any easy answers or solutions as human populations continue to grow and habitats shrink. What these chapters do not reveal is that the models, both the protectionist one in the form of parks or protected areas and the community-based, human-environment one, are, in general, not working. In large part, the assumptions used to justify the models are incorrect (cf. Galvin et al. 2002). As hard as it may seem, this and many other questions about nature and humans require a more integrated, holistic view of reality, one that can accommodate complexity and hierarchy. But we could not move forward without the efforts of people like those whose stories are told in this book and who are conceptualizing new ways of the wild.

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#### Homage Due

**Global Patterns of Plant Diversity: Alwyn H. Gentry's Forest Transect Data Set.** Miller, O. P., and J. S. Miller. 2002. Monographs in systematic botany. Missouri Botanical Garden Press, St. Louis. 335 pp. \$45.00. ISBN 0-915279-12-6.

This unusual book is the legacy of the vision and hard work of Alwyn Gentry, whose life was cut short by a tragic airplane accident in 1993. This book is perhaps the best testimony to this Missouri Botanical Garden scientist's remarkable career, similar in trajectory to those of some of the great tropical botanists of the nineteenth and twentieth centuries. In most cases, these botanists began their studies and careers in systematics, either in floristics or in taxonomic revisions. Grappling with the biodiversity within a group or region was the springboard for speculation and research on the broader questions of ecology and evolution. Such nineteenth-century greats as Joseph Hooker and A. H. Ridley and twentieth-century luminaries as A. J. H. Corner and C. G. G. J. van Steenis come to mind. Late in the twentieth century, the study of biodiversity in the tropics took on a new urgency as we became more aware of its fragility in the face of enormous pressures for extraction and development. Systematists again rose above their original research foci to grapple with issues of evolution and conservation. The work of Peter Ashton on the Dipterocarpaceae, speciation in the tropics, and then sustainable tropical forestry, as well as that of Ghilleen Prance on the Lecythidaceae and biodiversity conservation in the Neotropics, are two good examples. Gentry's own director,

Peter Raven, moved beyond his systematic knowledge of the Onagraceae to forge new ideas in evolution and became a leading spokesperson on the threats of extinction and the need to conserve biodiversity.

We can only speculate on how much further Alwin Gentry would have gone in his research on the origins of plant diversity in the Neotropics and his path-breaking work in strategies for conserving biodiversity. Unlike Raven, Gentry wasn't the administrative type, perhaps too plainspoken and lacking in the needed elegance, but he would have continued to help discover more biodiversity hotspots and new concepts about the forces creating plant and ecological diversity in the tropics. Botanists, conservationists, and many others still grieve his loss a decade later.

The problem faced by plant biologists concerned with the questions of how plant diversity evolved in the tropics and what determines the gradients in this diversity has been the variety of techniques employed to sample diversity in different locations. It has been extremely difficult—in most cases impossible—to compare the results of such surveys. One of Gentry's major achievements was to establish a single method for the rapid assessment of tree diversity in forests. He originally established the method to aid in his own studies of diversity within the Bignoniaceae, including the lianas of such importance in this plant family. The standard quadrat methods underestimate species diversity in any given forest location. Gentry's method, however, sampled an area of 0.1 ha through the use of repeated transects (10 2 × 50 m subplots), each proceeding in a random direction from the end of the previous one. Gentry found that a single site of a species-rich tropical rainforest could be sampled in a few days. Gentry was also realistic, however, in his low expectation of others quickly adopting his method, so he established an international database

pretty much by himself. He visited forest sites on all continents, from low to high latitudes and from dry to wet climates, completing a total of 211 transects.

Gentry's development of this technique, along with his unparalleled practical ability to identify plant groups (Gentry & Vasquez 1993), became powerful tools in researching the constraints on diversity in forests and in assessing biodiversity hotspots. Importantly, Murray Gell-Mann and Ted Parker discussed the impending loss of diversity on a birding trip in Venezuela in 1985 and proposed the establishment of the Rapid Assessment Program (RAP) that became an early program of Conservation International. As a board member of the McArthur Foundation, Gell-Mann also was instrumental in the provision of funds for RAP in its formative days, and Gentry and Parker were among the founding participants in this revolutionary program. They participated in five such RAPs before their deaths. Another 19 have been completed since that time, still using Gentry's transect method (<http://www.biodiversityscience.org>).

*Global Patterns of Plant Diversity*, written by two former colleagues of Gentry's at the Missouri Botanical Garden, documents the development of the transect technique and summarizes the results for a total of 226 sites (15 added by colleagues). These sites span a latitude range from over 50° north to 40° south and cover all continents, excluding Antarctica. Most of the sites are tropical, and particularly Neotropical. Specimens collected from the transects were well-vouchered: over half of Gentry's some 80,000 personal accessions were related to his transect surveys. This field research was a monumental task, made possible only by Gentry's vision, courage, and exceedingly demanding work ethic.

The bulk of the book consists of one-page summaries of the 226 sites, providing environmental data, lists of important taxa, and estimates of biomass and tree diversity. I had ini-

tially thought this section would be boring, but I frequently found myself visiting different sites to compare them with my own impressions of what would be there. The summary provides an example of the impressive transect database established by the Missouri Botanical Garden ([http://www.mobot.org/research/applied\\_research.explan.html](http://www.mobot.org/research/applied_research.explan.html)), which provides the species lists for each site, including numbers of individuals and bole diameters, and the herbarium numbers of Gentry's vouchers. Ultimately, all the latter will be downloadable as high-resolution images. Thus, the book provides an entry to one of the most important comparative databases on forest diversity ever established. Descriptions of transects are preceded by a lengthy section of photographs of many of the sites, most of murky and mediocre quality. Gentry was a far better botanist than photographer.

Although Gentry was able to use some of the results of this comparative survey during his life—for example, his valuable paper on tree species richness in forests of the upper Amazon (1988)—the most important analyses came after his death, done partly by collaborators who had worked with him. Notable is a landmark paper on factors influencing the diversity and dynamics of tropical rainforest species by one of the authors of this book, Oliver Phillips (Phillips et al. 1994). Givnish (1999) used these surveys to add to the arguments on the causes of latitudinal gradients in taxonomic diversity. These transect data continue to be used in path-breaking research in tropical plant ecology and evolutionary biology (Enquist & Niklas 2000; Enquist et al. 2002).

This book describes a remarkable program of research of enormous value for studies in conservation biology and evolutionary ecology. It is ultimately a better testimony to the remarkable character and achievements of Alwyn Gentry than the many obituaries that followed his

tragic end. The book is sturdily bound and of reasonable price, and it should be in the hands of ecologists and conservation biologists interested in questions of biodiversity, particularly of tropical plants.

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### Recently Received Books (July 2002–February 2003)

**Alternative Futures for Changing Landscapes: the Upper San Pedro River Basin in Arizona and Sonora.** Steinitz, C., H. Arias, S. Bassett, M. Flaxman, T. Goode, T. Maddock III, D. Mount, R. Peiser, and A. Shearer. 2003. 217 pp. \$60.00 (hardcover). ISBN 1-55963-335-2. \$30.00 (paperback). ISBN 1-55963-222-4.

**Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory.** Wolfe, C. 2003. 252 pp. \$49.00 (hardcover). ISBN 0-226-90513-6. \$18.00 (paperback). ISBN 0-226-90514-4.

**Australian Plant Communities: Dynamics of Structure, Growth and Biodiversity.** Specht, R. L., and A. Specht. 2003. Oxford University

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**Deforesting the Earth: from Prehistory to Global Crisis.** Williams, M. 2003. The University of Chicago Press, Chicago. 689 pp. \$70.00. ISBN 0-226-89926-9.

**Fortress Conservation: the Preservation of the Mkomazi Game Reserve, Tanzania.** Brockington, D. 2002. Indiana University Press, Bloomington. 224 pp. \$22.95 (paperback). ISBN 0-253-21520-X.

**Juvenile Primates: Life History, Development, and Behavior.** Pereira, M. E., and L. A. Fairbanks, editors. 2003. The University of Chicago Press, Chicago. 461 pp. \$30.00 (paperback). ISBN 0-226-65622-5.

**Managing and Conserving Grassy Woodlands.** McIntyre, S., J. G. McIvor, and K. M.

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**A Passion for Wildlife: the History of the Canadian Wildlife Service.** Burnett, J. A. 2003. University of British Columbia Press, Vancouver, British Columbia, Canada. 346 pp. \$85.00 (hardcover). ISBN 0-7748-0960-4. \$27.95 (paperback). ISBN 0-7748-0961-2.

**Renaissance Man of Cannery Row: the Life and Letters of Edward F. Ricketts.** 2002. The University of Alabama Press, Tuscaloosa. 320 pp. \$39.95. ISBN 0-8173-1172-6.

**Wildlife, Fire and Future Climate: a Forest Ecosystem Analysis.** 2002. CSIRO Publishing, Collingwood, Victoria, Australia. 196 pp. AU\$80.00 (paperback). ISBN 0-643-06756-6.

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