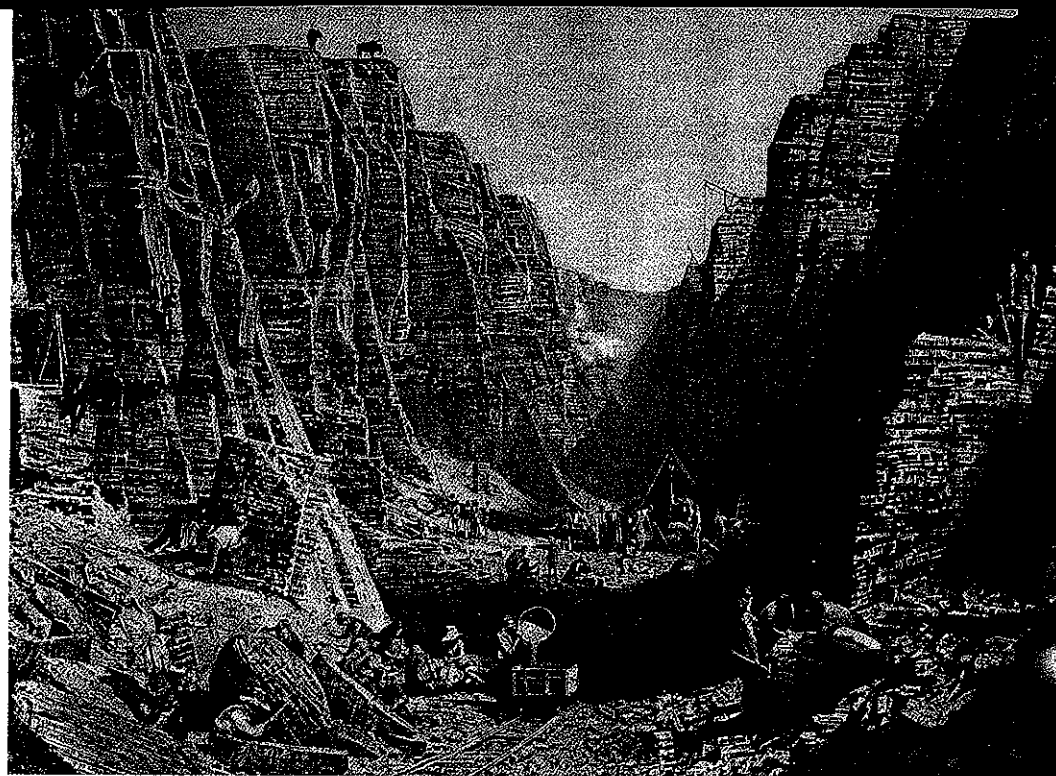


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A COMPANION TO  
AMERICAN  
ENVIRONMENTAL  
HISTORY

EDITED BY  
Douglas Cazaux Sackman

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Sackman

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AMERICAN ENVIRONMENTAL  
HISTORY

  
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# A COMPANION TO AMERICAN ENVIRONMENTAL HISTORY

*Edited by*

Douglas Cazaux Sackman

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## Chapter Nine

# BODY COUNTS: TRACKING THE HUMAN BODY THROUGH ENVIRONMENTAL HISTORY

*Neil M. Maher*

### Introduction

The field of environmental history today is littered with bodies. Environmental historians have written about the bodies of Native Americans, colonists, Western settlers, and slaves. They have researched the history of working bodies and those at play in nature, of urban bodies and those residing instead in the countryside, and of bodies that have destroyed the natural environment and those that have tried to restore it. Male and female bodies have become of interest to the field, along with those that can reproduce offspring and those that cannot. More recently, scholars have explored healthy bodies as well as those that are sneezing, sick, and long past dead. Environmental historians have even made space for bodies in outer space.

Yet unlike cheap dime-store detective novels, which often open with a body, environmental history scholarship did not begin with a focus on the corporeal. During the field's early years, in the 1970s and 1980s, human bodies were often an afterthought, a sideshow for other historical processes taking place in the natural environment underfoot. Since that time, however, scholars in the field have employed human bodies in a variety of ways – as metaphors for larger historical processes, as sites of inscription for broader historical meaning, and as real, physical spaces that serve as categories of analysis for historical events, movements, and periods. Which raises several important questions: How did this gathering of bodies within the field of environmental history become so crowded? Why have human bodies come to embody such a wide swath of environmental history literature? Finally, what does an embodied environmental history mean for the future of the field as a whole?

Before trying to answer these questions, I would like to explain what I will *not* be doing in this essay. First, I have refrained from reviewing the

wonderfully rich and diverse literature on the human body from other academic disciplines that might be of interest to environmental historians; there is just too much interesting scholarship on the body within women's history, gender studies, literary studies, and feminist theory to cover in one short essay (for a good overview of the body as a methodology in other academic fields, see, for instance, Canning 1999). Instead, I have read selectively, focusing on works within the field of environmental history that include some sort of analysis of the human body. Second, this essay is not addressed directly to academics from other fields, though I hope they will find it helpful in better understanding recent developments within environmental history. Rather, my audience is fellow environmental historians who are interested in learning about the historiographical evolution of the human body as a category of historical analysis within our field. Finally, because no other similar essay has yet to be published, what follows is very much a first attempt at opening a dialogue on the body's place within environmental history research and writing.

While the literature on the human body within environmental history is currently diverse, in tracing its evolution since the birth of the field in the 1970s to the present I have identified five general phases, or historiographical eras. A groundbreaking publication inaugurated each of these eras, and in turn encouraged fellow environmental historians to study the human body and its relation to the environment in similar ways. Here I want to emphasize that these historiographical phases do not represent neatly defined schools of academics, each loyal to a specific framework. The literature on the body within environmental history is messier than that, with overlapping chronologies and modes of analysis. Instead, what follows is an admittedly rough roadmap, with intellectual bumps and detours, which categorizes environmental history literature on the human body across both time and historical approach.

Before guiding readers down this body-strewn path, however, it is first necessary to understand the early study of the body outside our field. In many respects, interest in the body as an analytical category in the humanities originated with Michel Foucault, whose work theorizes that the human body derives its meaning from competing powers discoursing upon it. To greatly simplify, Foucault (e.g., 1995) and his followers, including Judith Butler (1990, 1993), view the body as a cultural construct and are intellectually hostile to the idea that bodies can be objectively analyzed as material entities. Powerful social discourses about bodies – not real, physical bodies – matter. While such an approach appealed to scholars in a variety of academic disciplines, early on it posed serious problems for environmental historians, who since the birth of their field in the 1970s have focused much of their historical analysis on material changes in the physical environment. As we will see, environmental historians not only rose to the challenge by incorporating the ideas of Foucault and others into their scholarship.

Perhaps more importantly, the analytical skills and interests of environmental historians made them ideally suited to bringing the material body, slowly but surely, back into historical scholarship.

### Bodies as Disease

In 1972 Alfred Crosby put the human body on the environmental history map with the publication of *The Columbian Exchange: The Biological and Cultural Consequences of 1492* (1972). Instead of focusing on the economic, political, or social implications of Europeans' arrival in the New World, as many historians from other historical subdisciplines had done, Crosby explores the biological repercussions of contact between two peoples. In particular, he traces the migration of European plants, domesticated animals, and diseases to the New World and analyzes their devastating impact on Native American societies. It is within his discussion of European diseases in the New World that Crosby introduces bodily history to environmental historians. Because they were physically isolated in North America for thousands of generations, Native Americans built up little resistance to European diseases such as smallpox and measles, with the result that in Central Mexico, for instance, the native population plummeted by approximately 33 percent during the first decade of contact (53). In his final chapter on syphilis, which appears to have been a New World disease that traveled back across the Atlantic to Europe, Crosby incorporates colonial bodies into his history as well.

The publication of *The Columbian Exchange* encouraged several environmental historians to include in their own work an examination of the bodily history of contact. William McNeill's *Plagues and Peoples* (1976), William Cronon's *Changes in the Land: Indians, Colonists, and the Ecology of New England* (1983), Richard White's *Roots of Dependency: Subsistence, Environment, and Social Change Among the Choctaws, Pawnees, and Navajos* (1983), and Crosby's own *Ecological Imperialism: The Biological Expansion of Europe, 900–1900* (1986) all explore the role that European diseases played in decreasing indigenous populations to the point where these native societies were unable to continue their land use practices and in turn became increasingly dependent on European trade. "The demographic collapse which diseases visited upon Indian populations was instrumental in disrupting the Indians' status system so as to encourage their participation in the fur trade," explains Cronon, with the result that "those diseases in turn helped promote European expansion" (1983: 161–2). Similar to Crosby, McNeill, Cronon, and White all rely heavily on anthropological and demographic source materials to gauge indigenous population estimates during the contact period (for an informative discussion of these demographic sources, see Cronon 1983: 226–7).



Carolyn Merchant joined this cohort with the publication of her book *Ecological Revolutions: Nature, Gender, and Science in New England* (1989). Similar to Crosby, Cronon, and White, Merchant examines the consequences of contact between Europeans and New World indigenes and argues that Old World diseases, which decimated Native-American populations, helped foster an "ecological revolution" that radically altered the economy, social life, and environment of New England. Yet Merchant's book pushes beyond these earlier works with respect to the human body. Expanding on the theory, first put forth by Arthur McEvoy (1987) and later elaborated on by Donald Worster (1990), which posits that ecological, economic, and ideological transformations throughout history occur in tandem, Merchant (1989, 1990) adds the fourth category of "reproduction" to this mix (for different variations of this interactive theory of nature, production, and cognition, see McEvoy 1987: 300; Worster 1990). For Merchant, reproduction includes not only what she calls "social reproduction," involving instruction to younger generations regarding daily practices, social norms, and legal-political structures, but also "biological reproduction" resulting in birth. By incorporating reproduction into her work, Merchant expanded the field's narrow use of human bodies as sites for disease to engage as well bodies that are biologically female and socially gendered.<sup>1</sup> Environmental historian Mart Stewart, in his 1991 article "Rice, Water, and Power" and later in his book *What Nature Suffers to Groe* (1996), similarly illustrates that diseased bodies moving through the environment are racialized as well.<sup>2</sup> Merchant and Stewart's work encouraged environmental historians to become more conscious about the specific types of bodies peopling their history.

This early research by environmental historians has recently sparked similar scholarship that also examines the body as a site for disease. Conevery Bolton Valenčius's *The Health of the Country: How American Settlers Understood Themselves and Their Land* (2002) examines the various ways antebellum settlers envisioned the landscape of present-day Arkansas and Missouri, and convincingly argues for the existence of a perceptual unity between the natural environment of the frontier and the human bodies settling it. In her chapter titled "Body," for instance, she illustrates how early settlers often viewed malodorous swamps, stagnant air, and unkempt land as not only the cause of bodily ailments but also as analogous to them. Settlers, in other words, viewed landscape features such as swollen rivers as both a cause of similar bodily ailments, such as swollen limbs, and also as signifiers that the land itself was unhealthy. David Iglar (2004) similarly expands on this early literature by exploring the connections between bodies and the spread of diseases during the early nineteenth-century rise of international trade across the Pacific rim.

While this inaugural phase of environmental history research on the human body from the 1970s and 1980s narrates the tragic demographic, social, and environmental consequences occurring as Old World diseases

make their way to North American shores, there are, in fact, few real, physical human bodies populating the pages of these works. Alfred Crosby does include a careful analysis of Native American blood types in *The Columbian Exchange* to make the case for the genetic isolation of New World populations (22–30), Cronon (1983: 85–91) and White (1983) do discuss the susceptibility of indigenous bodies to European diseases, and Stewart (1996) thoroughly explores slaves' immunity to certain strains of malaria. Yet all of these works are more about bodily diseases than about diseased bodies. This early school of environmental historians refrains from exploring, for instance, how smallpox and malaria affect the physiology of Indian and colonial bodies and how these very physical changes in turn transform infected cultures. Even Carolyn Merchant's examination of "biological reproduction" is more an examination of gender differences in colonial American society than an exploration of women's physical bodies. Unlike Foucault and his followers, then, the environmental historians from this first historiographical era were not consciously engaging the human body as a category of analysis. Instead, bodies during contact became metaphorical substitutes for disease.

### Bodies at Work

This emphasis on bodily diseases within the field of environmental history expanded during the mid-to-late 1990s to include an interest in bodily afflictions affecting the working class. Christopher Sellers was in large part responsible for this broadening from a narrow focus on contact and diseases to include as well the dangers faced by industrial laborers in the twentieth century. In his article "Factory as Environment" (1994), and in his subsequent book *Hazards of the Job: From Industrial Disease to Environmental Health Science* (1997), Sellers roots the rise of modern environmental science in the industrial hygiene movement of the early twentieth century. In both publications, Progressive-era engineers and health professionals such as Alice Hamilton use clinical examinations of workers' bodies to document environmental hazards from dust to noxious fumes to life-threatening chemicals, all in an effort to pass workplace safety regulations. Sellers employs the human body similarly in "Body, Place and the State" (1999b), which roots the rise of modern environmentalism in the legal history of pesticide exposure on postwar Long Island. More than an arena for analyzing disease, for Sellers the human body is a historical agent in its own right, influencing scientific understandings and public policy.

Andrew Hurley followed Sellers' lead by also examining industrial health hazards in his book *Environmental Inequalities* (1995). Yet while Hurley similarly explores workplace dangers, in his case occurring within a US Steel mill during the postwar era, *Environmental Inequalities* pushes beyond Sellers' work by following the factory's pollution out into the community

of Gary, Indiana, where it threatens all citizens' bodily health by fouling the city's air, water, and land resources. As one steel worker explained to a local newspaper, we "were sick and tired of working in pollution and having it follow us home" (Hurley 1995: 78). Tracing these hazards beyond factory walls allows Hurley to unearth competing sets of environmental concerns: white working-class anxiety about workplace health and safety; white middle-class awareness of the threat posed by the factory's pollution to suburban recreational amenities; and finally an African-American realization that dismal working conditions inside US Steel's plant as well as unhealthy living conditions in Gary's ghetto were both part of more endemic racial iniquities plaguing their city. During the 1970s, Gary's charismatic mayor was able to forge a powerful cross-class, multiracial coalition based on these competing environmental agendas, but the economic recession of the 1980s allowed US Steel to break this alliance by claiming that environmental regulations aimed at preserving worker and community health would cost jobs. Hurley's work shows that workers' bodies come in different races, as well as classes, and that environmental historians must pay close attention to these differences both within factories and without.

Arthur McEvoy also expands on Sellers' bodily history of industrial health in his article "Working Environments" (1995). Yet whereas Sellers focuses his research on exploring the factory as an environment, McEvoy instead argues that workplace hazards need to be studied ecologically. Factories, McEvoy insists, are analogous to chaotic uncontrollable ecosystems comprised of workers' bodies, technologies of production, and the legal ideologies that guide them, all of which must be studied holistically. "The key to the approach," McEvoy explains, "is to treat the workplace as an ecological system, of which the worker's body is the biological core" (149). McEvoy thus goes further than Sellers, or Carolyn Merchant for that matter, in promoting the material body, as opposed to social attitudes regarding bodies, as a category of historical analysis. "Thinking about the body in ecological rather than cultural terms," writes McEvoy, "would underscore not the plasticity of our attitudes but rather the constancy of the body's vulnerability to injury" (148-9). McEvoy thus implores environmental historians, for the very first time, to expand their analysis from cultural interpretations of human bodies to include as well more material analysis of corporeal history.

This second contingent of environmental historians writing in the mid-1990s thus broadened the study of bodies within the field from a narrow focus on diseases and contact to a broader interpretation that incorporated workplace dangers and workers' physical health. In many respects this focus on class, and in Hurley's case on race as well, coincided with the broad acceptance of social history as a historical method. Yet while these environmental historians pulled research on the body into the workplace, and then pushed it out again into the surrounding community, there were still few real, material bodies peopling these works. Instead, Arthur McEvoy took a

first step at promoting, on a theoretical level, the use of physical bodies as categories of historical analysis in an effort to historicize workplace injuries. Unfortunately, it would be almost a decade before fellow environmental historians heeded McEvoy's call for a more balanced environmental history of the body that incorporated both material and cultural interpretations.

### Inscribed Bodies

In 1995 Richard White broadened environmental history's focus on bodies at work in factories to include as well working bodies in a much wider array of labor settings. In his seminal article "'Are You an Environmentalist or Do You Work for a Living?'" (1995a), as well as in his book *The Organic Machine* (1995b), White laments that environmental historians have too often equated bodily work with the destruction of the natural environment. Instead, White argues that by digging, planting, harvesting, cutting, dragging, and even grazing livestock, farmers, loggers, and ranchers learn through their bodies about forests, fields, and plains. "We cannot come to terms with nature," White concludes, "without coming to terms with our own work, our own bodies, our own bodily knowledge" (1995a: 173). In *The Organic Machine*, White extends this argument regarding bodily knowledge to labor that is highly mediated by modern technology, such as much of the work undertaken more recently along the Columbia River with its many dams and power plants. Such a focus on bodily labor, White argues, helps environmental historians to understand better the blurred boundaries between nature and culture while placing humans squarely within the former.

White's work sparked an entire generation of scholarship that focused on bodily labor and the nature-culture question within environmental history. Douglas Sackman, in his article "Nature's Workshop" (2000), and in his book *Orange Empire* (2005), argues not only that orange pickers knew nature through labor, but also that orange groves, much like White's Columbia River, were hybridized landscapes comprised of both natural organisms and artificial technologies. Yet Sackman adds to White's work by incorporating gender and race into his analysis; while men and women handled fruit in different ways in separate spheres – with men in fields and women in packing houses – Chinese, Mexican, and Japanese migrant workers shaped, and were in turn shaped by, the Taylorization of the citrus industry at the outset of the twentieth century. Perhaps most important, Sackman undertakes an extensive analysis of the ways that workers' bodily labor mediated between the nature of citrus groves and the artificiality of the orange market. His work, Sackman concludes, "begins to map how the energy flows of human beings reached into those of the fruit-bearing organisms, melding into conduits of the global system known as 'the market'" (2000: 46).

My own work on the New Deal era focuses less on economic factors than on the political implications of workers' bodily labor. In "A New Deal Body Politic" (2002) and *Nature's New Deal* (2007), I examine the bodily work not of those degrading nature, as often happened along White's Columbia River and throughout Sackman's citrus groves, but rather of laborers attempting to restore the natural environment through federal conservation projects. Planting trees, halting soil erosion, and developing parks for outdoor recreation built up the bodies of the more than three million young boys enrolling in the CCC during the Great Depression. While these working-class enrollees, many of whom were recent immigrants, often equated their bulging biceps and renewed bodily health with their development into manhood, the Roosevelt administration employed these same physical transformations for political ends. With criticism of the New Deal increasing during the later 1930s, Roosevelt responded by publicly promoting the Corps' manual labor in nature, and the physical changes such work engendered, as a means of transforming working-class Italian, Polish, and Jewish boys into full-bodied American men. Bodily labor in nature, in other words, helped Roosevelt promote the modern welfare state to the American public.

Other environmental historians continue to build on Richard White's call to examine bodily knowledge about nature. In a chapter titled "Knowing Nature Through Leisure" in his book *Driven Wild* (2004), Paul Sutter argues that the spread of the automobile during the interwar years not only democratized nature tourism by allowing more Americans to physically experience scenic environments, but also, quite ironically, fostered wilderness advocacy as car culture began destroying wild areas. Thomas Andrews explores similar themes across the Colorado Rockies. While Andrews analyzes the bodily experiences of coal miners in his award winning *Killing for Coal* (2008), his article "Made by Toile?" (2005) argues that these miners, along with their physical labor and its effect on the Colorado landscape, all became increasingly invisible as elite tourists flocked to the region by railroad in search of a healthful, scenic retreat far removed from the enervating workplace. These environmental historians have taken Richard White's argument regarding bodily knowledge and transferred it from the realm of labor to the experiences of leisure.

This third generation of environmental historians following Richard White's lead greatly expanded the field's approach to human bodies. Rather than analyzing bodies as sites for disease, or focusing narrowly on the environmental hazards of the factory floor, White and his followers incorporated a much wider array of bodily labor, and leisure, into their historic analysis. The physical experiences of salmon fishermen on the Columbia River, orange pickers in southern California, tree planters during the Great Depression, and even automobile and railroad tourists seeking leisure and health in the great outdoors, all became source material for environmental historians. Yet here again, it was the physical experiences of these bodies,

more than the bodies themselves, that served as categories of historical analysis; the bodies in White's history, and in those that followed his lead, became inscribed with new historical meanings related to class and ethnicity, economics and politics, and work and play. In doing so, these environmental histories nevertheless placed the human body at the very center of the field's longstanding juxtaposition of the cultural and the natural.

### Cultured Bodies

While environmental historians have successfully followed Chris Sellers' lead by analyzing working-class bodies, and have also built upon Richard White's scholarship by inscribing laboring and playing bodies with various racial, ethnic, economic, and political meaning, the field as a whole has been less open to Carolyn Merchant's early arguments regarding the importance of exploring the relationship between gendered bodies and the natural environment. During the early 2000s, this gender gap within the field became increasingly obvious, and in response Virginia Scharff and Jenny Price conceptualized, organized, and publicized several panels on gender at two consecutive annual conferences of the American Society for Environmental History in 2001 and 2002. By placing the human body at the very center of their analysis, several presenters on these panels forced environmental historians attending the conference, and beyond, to rethink their approach to bodily history.

Scharff furthered these efforts in 2003 with the publication of an edited volume titled *Seeing Nature Through Gender* (2003b). In the introduction to her collection, she lamented the fact that "environmental historians have failed to see gender at work because they have told, almost exclusively, men's stories and have examined, nearly as exclusively, men's activities" (xv). The corrective, Scharff argued, was not simply to add women's stories and activities to environmental historians' methodology. Instead, environmental history must examine "the ways in which gender conditions historical relations between humans and nature, looking at the intertwined histories of women and men" (xv). Scharff does just this in *Seeing Nature Through Gender*, which includes thirteen essays divided into four parts covering the themes of "Representation," "Consumption," "Politics," and, most importantly for this essay, a section titled "Bodies" that includes four essays on a variety of topics. For the first time since the field's founding in the 1970s, an environmental history collection dedicated an entire thematic portion to the history of the human body.

Whereas Richard White and his followers used the body to explore the relationship between nature and culture, in *Seeing Nature Through Gender* Scharff inserts gender more self-consciously into this theoretical mix. "At a biological level, most human beings encounter the world through bodies

that are pretty much alike but differ according to sexual variation in certain organs that make us male and female," she reminds her readers. "But what those sexual difference *mean* to us – culturally, economically, historically – are questions we work out socially" (xiv). Thus, while being careful to make some room for physical bodies within its pages, it is the cultural meaning of human bodies that dominates *Seeing Nature Through Gender*; only one of the collection's essays, by Nancy Langston, investigates the biological history of the human body.

One of the best examples from *Seeing Nature Through Gender* of a cultural analysis of human bodies is Mark Tebeau's "Scaling New Heights" (2003). Tebeau links the physical changes affecting American cities during the late nineteenth century, which involved new construction materials resulting in much taller buildings, to a new fire ecology that made fighting blazes more dangerous. In response, firefighters not only improved their training techniques, organized their work routines, and added new technologies including longer ladders and special water pumps, but as important also began promoting to the urban public the notion that firefighting was an inherently masculine activity. "In the process," Tebeau concludes, firefighters "not only performed harrowing rescues and authored narratives of manhood in action, but also constructed the boundaries of their occupation as they became icons of safety" (66). As they became manly heroes that protected women and children, in other words, firefighters professionalized firefighting.

Whereas Tebeau's contribution to *Seeing Nature Through Gender* examines male firefighters climbing up ladders, Annie Gilbert Coleman's essay "From Snow Bunnies to Shred Betties" (2003) explores the cultural history of female bodies swooshing down ski slopes. According to Coleman, whereas women in the early postwar era were often stereotyped as so-called "Snow Bunnies" who flaunted their bodily femininity on the slopes during the day and in après ski bars at night, the women's movement of the 1970s, along with a ski industry desirous of selling more lift tickets to women, helped forge an alternative image of the snowboarding "Shred Betty," who embraced instead her athleticism, skill, and professionalism on the slopes. Coleman broadens this cultural analysis of the body in her book, *Ski Style: Sport and Culture in the Rockies* (2004), which traces the chronology of skiing in Colorado from its local origins as a transportation method in the mid-nineteenth century to its current incarnation as corporate industry. Part of this evolution, Coleman argues persuasively, involved the bodily history of imported Scandinavian ski instructors, whose good looks, masculine physiques, and physical athletic prowess on Colorado's mountains encouraged the growth of the ski industry.

Virginia Scharff thus helped foster a new era of scholarship that brought gendered bodies to the forefront of environmental history. Building on the earlier work of Carolyn Merchant, who urged environmental historians to include reproduction in their analysis, the contributors to *Seeing Nature Through Gender* successfully illustrate how human bodies remake

environments, whether deep within the city or high up in the mountains, and in turn how these altered natural environments refashion the social meaning of gender. This cultural turn is perhaps understandable, since the publication of Scharff's collection coincided with the maturation of cultural analysis within the broader history profession. Yet *Seeing Nature Through Gender* also suggests, quite forcefully, that the field of environmental history at the dawn of the twenty-first century had finally embraced the theoretical approach to bodies put forth decades earlier by the likes of Foucault and Butler.

### Balanced Bodies

The editors of a special issue of the journal *Osiris* titled *Landscapes of Exposure: Knowledge and Illness in Modern Environments* (Mitman et al. 2004a) were also well aware of the cultural approach, initiated by the likes of Foucault, to studying the human body. Historians of medicine and health, explained the special issue's editors, had a long history of "historicizing scientific conceptions" rather than treating them as objective analytical frames (11). Yet the editors included in the issue, even emphasized, interdisciplinary scholarship by geographers, anthropologists, and historians that also embraced "many kinds of materialist approaches" (Mitman et al. 2004b: 11). The essays in *Landscapes of Exposure*, in other words, not only examine the various social meanings of diseases caused by toxic spaces in modern society, they also trace, for instance, how the biology of specific diseases, the concrete effects of industrial capitalism, and the local ecologies of unique environments physically impact real, material bodies. The resulting volume was thus both an interdisciplinary effort to rejoin the once-separate histories of health and the environment, as well as a conscious attempt to promote scholarship that balanced out the cultural approach found in Scharff's *Seeing Nature Through Gender* with more materialist analysis (Mitman et al. 2004b: 2).

In many respects, such efforts were first suggested, theoretically at least, by Chris Sellers, who served as one of the editors of *Landscapes of Exposure*. In his article titled "Thoreau's Body: Towards an Embodied Environmental History" (1999a), Sellers encouraged environmental historians to bridge the scholarly divide between biological understandings of the human body by scientists such as E. O. Wilson, who see human bodies as primarily natural, and the works of humanists including Michel Foucault who view the body as more culturally constructed through the unequal use of power. In his essay, Sellers attempts this sort of balancing act by undertaking several historical "readings" of Henry David Thoreau's body, concluding that environmental historians "need to open our doors to a holism different from the 'ecosystemic' one" in order to encompass "the full range of discursive registers by which our society comprehends a phenomenon like the body, as 'nature-culture'" (502). The editors of *Landscapes of Exposure*



put this theoretical idea into practice, publishing numerous articles that blended historical analysis of human bodies as both cultural and natural.

Several of the essays in this special issue of *Osiris* were portions of full-length books, later published by environmental historians, that also wove together cultural and material interpretations of the human body. Similar to Conevery Bolton Valenčius's *The Health of the Country*, Linda Nash's *Inescapable Ecologies: A History of Environment, Disease, and Knowledge* (2006) examines the perceptions of early settlers, in Nash's case to California's Central Valley; they, too, envisioned connections between the physical landscape they moved across and the health of their own bodies. Yet Nash traces the subsidence of this belief with the rise of the germ theory, which proved how agents inside bodies, rather than landscape features, miasmas, and humors without, caused disease. As a result of this scientific shift, Nash argues, people lost an important bodily connection to, and useful knowledge about, the natural world. That is until the mid-twentieth century, when the Central Valley transitioned towards industrial agriculture and new concerns about pesticides raised interest once again in links between specific toxic landscapes and bodily health. In the end, Nash argues for a blending of both beliefs – one scientific and the other cultural – in order to better understand the lived experiences of illness. "I do not hew to either a materialist or a cultural approach, nor have I tried to separate the two," she explains. Because understandings of environment and diseases are shaped simultaneously by culture and material realities, she concludes, "these stories need to be told together" (10).

Gregg Mitman also is determined to balance cultural interpretations of public health with material realities on the ground in both his *Osiris* article "Geographies of Hope" (2004) and in his pathbreaking book *Breathing Space: How Allergies Shape Our Lives and Landscapes* (2007). Starting from the assumption that diseases are relational and place-based, Mitman argues that allergies, along with other diseases, are "not separate from the complex of environmental relations – physical, social, economic – out of which [they] came into being" (2007: 253). Illnesses and bodies' reaction to them, in other words, are comprised of both specific, scientific pathogens as well as socially defined spaces. Mitman expertly traces this blend of cultural and material interpretations of allergies through a diverse set of environments from the hay fever retreats of rural New Hampshire to the ragweed-choked vacant lots of New York City. In the latter, scientific breakthroughs in immunology, including the development of vaccines, serum therapies, and pollen maps, tell only part of this history. "Ragweed's migration into the city, and particularly into city slums," explains Mitman, "made it, like certain other neighborhood transients, an 'undesirable citizen'" (69). The bodily experiences of these allergy sufferers, in other words, must be understood as a mixture of material science taking place in immunology labs and cultural assumptions playing out in the urban ghetto.

Michelle Murphy embraced a similar methodological approach to human bodies in her book *Sick Building Syndrome and the Problem of Uncertainty*

(2006). Understanding full well that sick building syndrome is a highly contested illness, Murphy, who co-edited and wrote an essay for the *Osiris* volume, explains that her's is not a history of an idea. "Such an analysis," she explains, "can too easily be interpreted as arguing that indoor chemical exposures were and are not 'real'"(7). Instead, Murphy juxtaposes expert interpretations of sick building syndrome by the likes of industrial hygienists and toxicologists with lay opinions by feminist labor activists and female workers suffering from the syndrome's symptoms in order to historicize how certain chemical exposures became, or failed to become, materialized. In the end, rather than taking sides on whether sick building syndrome is "real" or not, Murphy uses these competing interpretations of bodily illnesses to highlight the uncertainty at the center of the human bodies' very real relationship to both diseases and the environment.

The 2004 special issue of *Osiris* not only succeeded in joining together the history of health and the environment, as its editors intended, but it and the full-length monographs that sprang from its pages also encouraged other environmental historians to more consciously balance cultural and materialist analyses of the human body. Nancy Langston, for instance, who published the article "Gender Transformed: Endocrine Disruptors in the Environment" (2003) in Virginia Scharff's collection *Seeing Nature Through Gender*, completed a book titled *Toxic Bodies: Hormone Disruptors and the Legacy of DES* (2010), which traces the pathways of powerful synthetic chemicals from industrial and urban sites out into the natural environment and then back into our bodies with serious health effects. Ellen Stroud, who in 2003 published a "Reflections" essay in *Environmental History* titled "From Six Feet Under the Field: Dead Bodies in the Classroom," is also currently researching a book on corpses that will, in part, follow toxic substances within the deceased – from pacemakers to mercury teeth fillings – back out into the natural environment through burial and cremation.

### Body Counts

The bodies in environmental history have aged quite well. Born in the 1970s and early 1980s as a site through which to study the diseases of contact, they grew up during the following decade as a means of also exploring the hazards of the industrial workplace. In the mid-1990s, environmental historians began inscribing working and playing bodies with economic and political meaning, and by the turn of the century the field embraced as well a wide variety of cultural meanings regarding gendered bodies. All of these different types of bodies crowding environmental history during its youth reflected, to a great extent, the early scholarship within the humanities by Foucault and his followers that interpreted human bodies as shaped by social discourse. It was not until recently that environmental history matured, and, guided by both an interest in analyzing physical changes in the natural world and

increased access to contemporary scientific source materials, began interweaving these earlier cultural interpretations of the human body with more materialistic approaches.

This wide variety of bodies has greatly benefited environmental history. Scholars in the field now have a plethora of bodies, along with a rich array of historic methodologies, to choose from. The result is an increasingly rich literature that examines wildly different bodies across enormously diverse environments. Such developments within environmental history have similarly benefited other academics; environmental historians' obsession with exploring the historic interaction of nature and culture, and the field's recent shift towards rejecting the intellectual dichotomy between the two, has made the field a pioneer in weaving together material and social interpretations of the human body. By incorporating the thinking of Foucault and others and then making it their own, environmental historians have become a model for other historic subdisciplines interested in bodily history.

With such opportunities, however, lurk dangers. Too often since the early days of environmental history its practitioners have been foot loose with their bodies. "People," "humans," "workers," "reproduction," "bodily labor," and "bodily diseases" are just a few of the terms used by environmental historians in their scholarship over the past thirty years to denote analysis focused on some aspect of the human body. Similar to the field's continual conundrum with the term "nature," the human body has become so many different things to so many different environmental historians that it risks becoming everything and nothing at all.

The answer to this problem, it seems, is quite simple. Environmental historians must be better at knowing their bodies. They must be much more precise when explaining what, exactly, they mean when analyzing the history of Native-American bodies in colonial America, or of workers' bodies in a US Steel plant, or women's bodies that are having trouble reproducing, or even when exploring astronaut bodies on the surface of the moon. Only by doing so will environmental historians continue the dialogue begun by Alfred Crosby in 1972 and truly succeed in making bodies count.

#### NOTES

- 1 For a more recent exploration, outside the field of environmental history, of women's labor, see Morgan (2004). Here, Morgan focuses on both the physical work of female slaves as well as on their biological reproduction.
- 2 For a more recent study, outside the field of environmental history, of the interrelationship between race, bodies, and disease during the colonial era, see Chaplin (2003). There is also a rich literature on the medical history of slavery and slave-owning cultures in the US South that examines in detail diseased bodies. See, for instance, Curtin (1968) and Klepp (1994).

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