ENVIRONMENTAL HISTORICAL GEOGRAPHY: A REVIEW

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Contents

1. Introduction
2. Environmental History and Environmental Historical Geography
3. An Intellectual Font
4. Geographic Influences or the Great Dead End
5. Isolated Explorations during the "Great Retreat"
6. Reversing the "Great Retreat"
7. Influential Pioneers and the Road Not Taken
8. The First Advance, 1960 - 1990
9. Sustained and Diversified Advances after 1990
10. Conclusions
Acknowledgments
Glossary
Bibliography
Biographical Sketch

Summary

Environmental historical geography has been long a core component of historical geography and has been acknowledged as a critical influence to the allied specialty of environmental history. In the English speaking world, it moved through several stages that focused on environmental influences, to culture history, to more explicit historical geography writ large. Since the 1960s there has been a steady increase in more environmental historical geography. Key approaches have been reconstruction of past environments, human impacts on the environment, historical geosophy, and environmental management.

1. Introduction

In 1992, a modest volume entitled The American Environment: Interpretations of Past Geographies answered previous pleas for more environmentally engaged historical geography and presented what the editors considered to be examples of a flourishing genre (Dilsaver and Colten 1992). As one of the collaborators on that volume, the present author held no illusion that they were launching a novel or innovative research agenda. Indeed, the authors (Dilsaver and Colten 1992) pointed out that there had been a long tradition of historical geography of the environment, albeit one that was neither deliberate nor structured. Our goal was to showcase the range of inquiries being undertaken by historical geographers and respond to the burgeoning body of work being produced by
environmental historians. In a way, the authors sought to remind the scholarly community that much of the fine work that appeared as environmental history had its roots in the work of geographers, as Donald Worster (1988, 306) had observed. And while no claim has been made for inspiring publications that followed, there was a vigorous phase of self-evaluation by scholars who shared an interest in exploring environmental topics through a historical and geographic lens in the ensuing years (Williams 1994, Demeritt 1994, Butlin and Roberts 1995, and Powell 1996).

We shared concerns expressed subsequently by Michael Williams (1994) who lamented the lack of attention environmental historians had given to historical geography. Nonetheless, shortly after the start of the new century there were several statements that acknowledged a turn toward environmental topics. Catherine Nash observed that "human geography seems to have ‘gone back to nature’" (Nash 2000, 23). Alan Baker asserted that historical geography of the environment was one of the four principal discourses in the specialty (Baker 2003) and the historical geography chapter in Geography in America devoted a section to environmental literature (Colten et al. 2003). The decade between the publication of The American Environment and these declarations of the coming of age of environmental historical geography saw substantial growth and diversification. Its trajectory has not paralleled the expansive growth of environmental history, but geographers have contributed monographic and article-length works that have garnered attention beyond our discipline.

The focus of this entry will be on environmental historical geography. In their 1992 volume, Dilsaver and Colten used the term historical geography of the environment and sought to focus on what they referred to as "research findings that integrate human activity and environmental processes within the context of historical geography" (Colten and Dilsaver 1992, 2). In his 1992 examination of the relations of environmental history and historical geography, Williams used the phrase: the "society/nature problematic" – a term borrowed from Kenneth Olwig (Williams 1994 and Olwig 1980) – that he used to mean "the synthesis and integration of environmental phenomena with cultural and socio-economic change" (Williams 1994, 3 and see Olwig 1980). In an introduction to a special issue of the Geographical Review published in 1998, Colten noted that environmental historical geography differed from environmental history in its emphasis on the environment as "the foundation for human action, the dynamic setting on which past societies created their geographies by transformative or interactive processes" (Colten 1998, iii). Of course environmental historical geography encompasses much more – including past understanding of the environment (Wright 1925 and Glacken 1967).

At a fundamental level, the present author contends that geographers foreground the environment and environmental process in their analyses of human-environmental interactions. Carl Sauer’s students often began historical geographies with the reconstruction of past environments and then proceeded to consider how the movement of people and plants and animals altered pre-existing conditions. This line of inquiry blends a solid foundation in physical geography and the use of geographic analysis. Andrew Clark and his students considered the arrival of colonial societies to new settings and the ensuing changes to their newfound territories. Often Clark’s students distinguished their work by challenging long-standing historical concepts through
geographic analysis, but the environment was assumed to be a fundamental element in their work. Baker (2003) observes that environmental historical geographies include the reconstruction of past natural environments, human modification of natural environments, and historical geosophy. His classification covers most of the post-1990s environmental historical geography, although omitting environmental policy and management. Baker also neglects to truly distinguish it from environmental history. Two things to the author’s mind demarcate the somewhat fuzzy division: (1) rooting the research in either past environmental conditions (natural flora, fauna, climate, etc.), acknowledging and investigating the relationships with humans, and tracing human interactions with those conditions over time and (2) analysis of historical information about past environments within a geographic context – deploying geographic concepts and theories or cartographic analysis to add value to the historical narrative through a geographic lens. The first element may include historical reconstruction of past environments or ideas about past environments, but the environment comes first – not the political or social context as is typical in environmental history. While bringing the environment to the fore may exclude some of the recent work that touches on past environments through critical social theories or by emphasizing social construction, which often result in incidental environmental scholarship, scholars employing these perspectives seldom affiliate with historical geography. This chapter will trace the scholarly antecedents upon which a healthy body of environmental historical geography is built and identify the principal currents and contributions of recent years. Given the volume of scholarly work, it will be more representative than comprehensive and also limited in its linguistic range primarily to the Anglophone literature. The author will try to portray the work in historical geography with a prominent human-environment focus, whether reconstructing past environments, tracing human impacts on the environment, considering policies and practices of managing the environment, or elucidating the ideas and concepts held by people about their environment.

2. Environmental History and Environmental Historical Geography

There have been several discussions on the relationship of environmental history and environmental historical geography (Williams 1994, Powell 1996, Colten 1998, and Baker 2003), and it is essential to recognize the intellectual overlap of these two similar but distinct specializations. Nonetheless, this review will only touch lightly on the impressive and rapidly expanding body of work in environmental history. While deserving of expanded treatment, as John McNeill recently observed the robust field of environmental history has produced such a catalog of titles that a proper survey is now largely beyond the reach of a single individual (McNeill 2003). Given the expansion of the two related fields, this review will point out some of the overviews of environmental history and how they dealt with historical geography, and then move more directly in subsequent sections to the work written by geographers.

From their earliest articulations of self-identification to more recent expositions, environmental historians have consistently nodded toward historical geography as an influence or a point of departure. Richard White acknowledges the important regional studies written by historical geographers such as Carl Sauer, Andrew Clark, and Donald Meinig that depict human influences on the landscape (White 1985). Donald Worster pays tribute to historical geographers: "it has preeminently been geographers who have
helped us all see that our situation is no longer one of being shaped by environment; rather, it is increasingly we are doing the shaping" (Worster 1988, 306). While William Cronon (1993) and Carolyn Merchant (2005) do not cite historical geographers in their brief statements on environmental history they are certainly aware of the work in the adjacent field. John McNeill (2003) and Douglas Weiner (2005) both acknowledge historical geographers have contributed to the overall environmental history project. Although as environmental history has gained a more prominent academic standing, some seem to forget the early debt environmental history owes to historical geography, suggesting that historical geographers have finally discovered environmental history and are producing credible examples (Hughes 2006, 9). Nonetheless, there is a growing presence of geographical scholarship in their journal and at the environmental conferences in the U.S. and in Europe.

Within historical geography, J. M. Powell observes that "there is really little or nothing in the environmental historians’ agenda which is foreign territory to the historical geographer" (Powell 1996, 255). Colten notes that the paths of environmental history and historical geography of the environment "have so intertwined in recent years it is not unreasonable to ask whether any distinction remains beyond the disciplinary labels and their intellectual foundations" (Colten 1998, iii). Baker, however, comments that disciplinary boundaries filter scholarship and stand as barriers to interdisciplinary collaboration (Baker 2003, 83). While Baker’s observation is true, the divide has been unnecessarily fortified by cultural geographers’ critiques of the disparate language and goals of cultural geography and environmental history (Demeritt 1994, and see Powell 1996). The linguistic barriers between much of what is presented as environmental historical geography and environmental history are less formidable than those fabricated by theory driven cultural geography. What is important to emphasize, however, is that environmental historians have included geographers in their journals, their meetings, and in collaborative book projects (see Wynn 2006 and Armstrong et al. 2009). And although some observers have bemoaned the lack of geography citations in the work of environmental historians, ongoing collaborations demonstrate vigorous engagement between the two specialties. Such interactions are more constructive than erecting barriers through elaborate demarcations of intellectual territories.

3. An Intellectual Font

George Perkins Marsh, the gentleman farmer - diplomat of Vermont, unquestionably holds a distinguished place in the intellectual development of our concern with environmental historical geography. Marsh published his influential *Man and Nature; or Physical Geography as Modified by Human Action* in 1864. His book recounts the consequences of deforestation and drainage efforts in the Mediterranean basin. He sought to convince his contemporaries that humans played a key role in shaping the earth and that their actions could ultimately lead to the destruction of the earth and humans alike. As David Lowenthal asserts, *"Man and Nature" ushered in a revolution in how people conceived their relations with the earth*" (Lowenthal 2000b, 3 and Lowenthal 2000a).

This revolution was carried out by Italian foresters and Arbor Day enthusiasts, and conservation campaigns that reached the United States, Japan, and Australia. Nineteenth century French geographer Elisee Reclus also embraced Marsh. Yet, his writing fell out
of favor – though certainly not disappearing entirely – during the early twentieth century, until given a boost in visibility by Patrick Geddes and Lewis Mumford. Their so-called "rediscovery" of Marsh eventually contributed to the 1955 conference that produced the classic anthology *Man’s Role in Changing the Face of the Earth* (Thomas 1956) and its subsequent updating *The Earth as Transformed by Human Action* (Turner et al. 1990). The common thread through these works is that human actions produce environmental consequences. Marsh looked at those impacts at the local-regional scale. The later volumes honoring Marsh’s work have expanded the scale. By 1990, Turner and others examined human impacts from the watershed to the global scale (Olwig 1980, Lowenthal 2000a and Turner et al. 1990). These recent investigations no longer focus solely on deforestation, drainage, and erosion. Sophisticated environmental analyses can trace the long-term changes in global temperature, atmospheric chemistry, and water quality. While the scale of inquiry has expanded and the range of human impacts has diversified, the fundamental theme of human impacts remains constant.

4. Geographic Influences or the Great Dead End

Many geographers lost sight of Marsh’s vision as geography emerged from geology as a specialized field in the American academy in the early twentieth century. Influenced by German geography, two prominent works propelled historical geography of the environment into the forefront of this enterprise. The erstwhile historical geographies of Ellen Semple and Albert Brigham actually subverted Marsh’s perspective. They clearly emphasized the human dimension of geography, while retaining links to its physical foundation through their assertions of environmental determinism. Ellen Semple’s *American History and Its Geographic Conditions* (1903 and 1933) and Albert Brigham’s similarly titled work, *Geographic Influences in American History* (1903), established what Michael Conzen identifies as the first identifiable "school" in American historical geography (Conzen 1993).

Sempel offers a lively account of the geographic influences in the settlement of the United States. In her own words the book "defines the relationship between historical movements in the United States the natural environment as the stage upon which history unfolds" (1933, v). As she tells the story, landforms and climate shaped the colonial ventures, the advance of pioneer settlers, the campaigns of the Civil War, agricultural landscapes, transportation networks, and the growth of cities and industries. There were imperfections in her arguments. She presented mountains as barriers to inland penetration, but she concedes that technology (roads and canals) eventually overcame this geographic condition. Thus, in Semple’s account, geographic conditions were highly influential, but their power was not permanent or even consistent. Also, while she insists that "bulges" – or pathways of advance – in settlement followed inland rivers, she ignores the flood threat of major waterways that may have deterred settlement immediately adjacent to waterways. Such inconsistencies plagued the environmental determinists.

Brigham’s work was largely a regional treatment that depicts the "natural unity" of each region and portrays the distinctive "type of life" that developed in each unique setting. He claims that "at each step we have assured ourselves that geographic influences are real, but real as they are, they cannot be narrowly defined or be given in quantitative terms" (Brigham 1903, 311). It was the claimed but unmeasurable influences that ultimately
doomed the environmental determinists.

Nonetheless, the work of Semple and Brigham bound geographic scholarship, a historical perspective, and the environment. Their work guided a generation of scholars who produced a series of state-level and subsequently city studies making the case for environmental influences. Geographic influences persisted in geographic scholarship until the 1940s (Conzen 1993, 18-19). Criticism from Carl Sauer (1925 and 1941) contributed to its decline, and destined this line of inquiry to be the Great Dead End for historical geography of the environment. Nonetheless, Erhard Rostlund reminds us, environmental determinism persisted as "twentieth-century magic" because people believed it was true even after its academic debunking (Rostlund 1956). And critics of the recent popular work by Jared Diamond (1999) have revisited Rostlund’s term asserting *Guns, Germs and Steel* presents an example of "twenty-first century magic" (Eveden 2006). So although professional geographers no longer consider geographic influences a viable explanation for past human-environment relations; this line of thought undoubtedly shaped a prominent stage of historical geography and continues to provide a tantalizing framework for historical accounts a century later.

**5. Isolated Explorations during the "Great Retreat"**

Throughout much of the early twentieth century, beyond the discussion of environmental influences, there existed examples of physical geography that drew on historical sources to reconstruct past environments. Although Sauer (1941) referred to this period as the "Great Retreat," a modest literature appeared. Seldom if ever presented as historical geography per se, these works illustrate a viable, if minor, research agenda. Within this modest flow three fundamental concepts appear: historical documents can reveal past impacts on the environment, human activity has impacted the environment, and policy adjustments to environmental change offer insight into prevailing environmental issues.

E. P. Goodrich (1916), an engineer, used historical maps to trace the alteration of New York City’s harbors. He referred to the changing conditions as "geographic problems" and observed that the historical documents provided engineers with tools for planning urban services. Thus, he argued historical reconstruction of past environments could aid urban development.

A. E. Parkins wrote on the Great Lakes Indians and their environmental relations. While he commented on their long-term adaptation to their climatic setting, he pointed out that following European colonization, they over exploited fur bearing animals and had a deleterious impact on their resources (Parkins 1918). J. Russell Smith (1916) wrote of human destruction of forest and soil resources as he advocated tree-crop agriculture as a conservation tool. Glenn Trewartha, noted as a climatologist, displayed some of the greater diversity among academic geographers of his day when he published a series of articles on the Driftless Hill Country of Wisconsin. He characterizes resource exploitation as "destructive" and asserts that a "robber economy" prevailed for three quarters of a century as colonial ventures consumed furs and minerals (Trewartha 1940).

Gordon Sweet offers a historical assessment of oyster conservation in the Chesapeake Bay area to add a resource management treatment to the 1940s work on
human-environment relationships. Adding to the analysis of the Chesapeake Bay, Gottschalk (1945) considers the impact of agricultural settlement and the attendant erosion on navigation. Hugh Hammond Bennett, the founding director of the U.S. Soil Conservation Service and a former president of the Association of American Geographers, echoed Marsh’s warnings about the impacts of soil erosion as he advocated conservation policy (Bennett 1928, 1939, and 1943). These inquiries draw on a range of historical sources to depict either direct human impacts or policy approaches to recognized environmental change. And although we can see some of these topics picked up on by later generations, there appears to be no direct lineage.

Still another thread, one that explicitly seeks to establish connections to the environment, was Harlan Barrows’ "Geography as Human Ecology." Barrows in his early career followed the course of Ellen Semple and researched geographic influences, but by the early 1920s he voiced a position of his own. In his presidential address to the Association of American Geographers (AAG) he asserted that in the early twentieth century, there had been a considerable movement to "humanize" geography, to pull it away from its geological foundations. "Geography," he stated, "will aim to make clear the relationships existing between natural environments and the distribution and activities of man. Geographers will, I think, be wise to view this problem in general from the standpoint of man’s adjustment [emphasis added] to environment, rather than from that of environmental influences" (Barrows 1923, 3). According to William Koelsch, Barrows’ newly conceptualized human ecology saw humans, not nature, as the shaping force (Koelsch 1969, 637). While often tarred as a proponent of geographic influences, Barrows sought to move beyond that school of thought. Barrows never mentored many Ph.D. students and hence never established a Chicago school of historical geography. Nonetheless, he influenced such scholars as Gilbert White who also studied human adjustment to flood hazards for many years without incurring the label of environmental determinist (White 1958).

6. Reversing the "Great Retreat"

In his oft-cited AAG presidential address, "Foreword to Historical Geography," Carl Sauer (1941) calls for a geography that offers explanatory power by tracing current landscapes from their genesis. His vision was human geography as culture history, the study of human culture acting upon natural landscapes over time. To achieve this goal, he sought to reposition physical geography as one of the foundations for human geography and to reverse what he criticized as the "Great Retreat," or the retraction of geography from its geological roots that he attributed to Harlan Barrows (1923). At the core of his call for action was the study of cultural landscape creation over long periods of time – hence historical geography. Among the themes he identified for historical geographers to investigate were two that explicitly fall within our current view of environmental historical geography: (1) "certain processes of physical geography, involving secular change, may affect man." He included climate, vegetation, and drainage changes in the post-Pleistocene period and cited Marsh as pointing the way in that regard. He also identified: (2) "man as an agent of physical geography." In particular he suggested that geographers identify human influences on climate, geomorphology, hydrology, and plant and animal ecology (Sauer 1941, 371). In advancing this call for historical geography, Sauer situated physical geography as a fundamental component, and advocated
investigations that considered physical processes that might affect human society and the impacts humans may have on physical systems. While environmental issues that have become prominent in recent years, such as pollution, did not appear in Sauer’s 1941 challenge, they obviously fall within the scope of his two categories.

Sauer probably wrote less about the two key themes in historical geography of the environment than did his many students. Yet, one of the first substantive pieces he published following his AAG address, "A Geographic Sketch of Early Man in America," closely follows his prescription. It considers both the range of options shaped by long-term climate change on early migration to the Americas from Asia and also the impacts of the arrival of humans on the megafauna and flora of North America (Sauer 1944). Furthermore, his Agricultural Origins and Dispersals (Sauer 1952) offers a sweeping view of the movement of domesticated plants and animals on a global scale and in many respects prefaced the highly influential work by Alfred Crosby on the Columbian Exchange many years later (Crosby 1972). Northern Mists and The Spanish Main, produced much later in his career, exemplify his interests in using historical documents to reconstruct past environments (Sauer 1966 and 1968).

Sauer’s students consistently kept the human-environment relationship at the forefront of their work. Sauer saw the cultural landscape as the product of human action on the natural environment, and in Baker’s view conflated landscape and environment (Baker 2003, 82), but in his use of the term he wedded environment into all explanations of cultural landscapes. Kent Mathewson offers a substantial review of Sauer’s influence on the creation of "environmental geography" (Mathewson forthing) and he notes the importance of this approach as stated by Andrew Clark:

Perhaps the largest single theme, equally clear in the writings of Marsh and the Berkeley group . . . has been the emphasis on the historical record of man’s use, alteration, and rearrangement of his only potentially permanent resources: water, soil, vegetation, and animal life. (Clark 1954, 89)

Although many of Sauer’s students did not self-identify as historical geographers, they followed Sauer’s lead and traced long-term relationships between culture groups and their physical settings. Robert Bowman’s dissertation on soil erosion in Puerto Rico fully exemplifies the human-environment tradition (Bowman 1941). Normally, however, Sauer’s students included well-informed discussions of the physical geographic setting and fully integrated human-environment relations in their analysis, without necessarily foregrounding this relationship. Nonetheless, as Mathewson observes, many went on to offer substantial discussions of human-environment relations and second-generation Berkeley-school students did the same (Hewes and Frandson 1952, West 1957, Pennington1963, Denevan 1967, Johannessen 1971, and Parsons 1981).

Among the more obvious products of Sauer’s influences that showcase historical geography of the environment were two landmark publications. The first is the set edited by William Thomas, with Sauer largely serving as the ringmaster behind the endeavor, (Thomas 1956 and Williams 2003). Assembled from a conference that paid homage to George Perkins Marsh, the volume’s authors explicitly addressed issues that followed Marsh’s own concerns with deforestation and erosion, but also introduced key issues that became hallmarks of the later environmental revolution of the 1960s and 1970s. Among the topics included were fossil fuel consumption, water pollution, population pressure,
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Glossary
Environmental determinism: The concept that the environment determines human development.

Geosophy: The study of geographical knowledge from any and all points of view, coined by J.K. Wright.

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**Biographical Sketch**

**Craig E. Colten** is the Carl O. Sauer Professor of Geography at Louisiana State University (LSU). He earned his Ph.D. at Syracuse University in 1984 after receiving an M.A. degree from LSU in 1978. He spent a decade working with the Illinois State Museum managing a research team concerned with the historical geography of hazardous wastes. Following that experience, he moved into the private sector and managed the Washington, DC office of a environmental consulting company. In 1996, he accepted a position with Texas State University and spent the next four years there. For over a decade he has been employed with Louisiana State University. His principal publications include *The Road to Love Canal* (1996), *An Unnatural Metropolis* (2005), and *Perilous Place, Powerful Storm* (2009). He has also served as editor for the Geographical Review (2007-2012).