

THE NATURE OF ENVIRONMENTAL HISTORY

J. Donald Hughes*

1. A RAPIDLY GROWING FIELD OF HISTORY

The question, "What is environmental history?", is the prevailing question I used to get whenever I told anyone I was an environmental historian. It can be answered in two ways. It is an inquiry, and it is an academic field. I want to begin by saying something about the second of these. Less than eighteen years ago, when I became the editor of the American journal in the field, we had about 250 subscribers, and almost half of these were libraries. The most recent ASEH meeting in Durham, North Carolina had 400 scholars in attendance. The program chairs had a problem not all such chairs do; they had to be very selective in choosing the papers to be presented, because so many proposals were made. "Environmental History" is appearing as a desired sub-field in many academic job announcements in America, and the number of young scholars interested in graduate work in the subject has expanded remarkably. Other historical societies have had whole meetings on the subject, and journals have published special issues on environmental history, as the *Pacific Historical Review* did this year (2001). Talks on the subject are gathering large audiences in American universities.

An inquiry may make rapid progress when its limits are expanded. This happened in the history profession in America when environmental history swam into its view. It is not just an American phenomenon, however. The profession

has spread virtually worldwide. In discussing other nations where environmental historians had an established tradition by the last quarter of the twentieth century, one might have mentioned France and Britain. Today one would have to include several other European nations as well as India and Australia. Brazil and South Africa bid fair to be added to the list. More connection among scholars in this field could be fruitful. Europe has an Association, the European Society for Environmental History, and a journal, *Environment and History*, edited until recently by Richard Grove. There have been conferences in Finland, Germany, Australia, India, Hong Kong, Madeira, and Florence, and elsewhere. The ESEH will hold its first plenary conference on environmental history in St. Andrews, Scotland, September 5 - 8, 2001. Although the American Society for Environmental History has always welcomed international subjects and scholars in its biennial (now annual) conferences, a specifically international conference would also offer opportunities for interchange and the advancement of cooperative research. The number of books in the field is, of course, expanding exponentially everywhere. A list of some of the more influential books in the field, and related fields, is appended to this essay.

2. SOMETHING NOT ONLY HISTORIANS DO

But environmental history is not limited to historians. To a degree not common for most

* John Evans Professor of History. University of Denver, Denver, CO 80208, USA.

other historical subjects, books on environmental history are written by authors from other disciplines: geographers like Ian Simmons, anthropologists like Kay Milton, and biologists like Robert McIntosh. This may be the result of the interdisciplinary nature of the subject itself, since to do environmental history properly requires familiarity with ecology and other sciences, the history of science and technology, and geography and other branches of the social sciences and humanities. There are several historical fields so closely allied to environmental history that a rigid line of separation cannot always be drawn. These include but are not limited to forest history, agricultural history, historical climatology, and the history of epidemics. Historical geographers discovered that they shared a border with environmental history, a border that they crossed with impunity. Indeed, some fine world environmental history has been written by geographers. As the Australian environmental historian Stephen Dovers remarked, "It is hard to define the boundary between historical geography and environmental history" (Dovers, 1999: 7). Among the geographers who have crossed the boundary is Ian Gordon Simmons, whose *Changing the Face of the Earth: Culture, Environment, History* (1989) is a brief, technically based review of the subject. Andrew Goudie's useful text, *The Human Impact on the Natural Environment* (2000), has reached its fifth edition.

3. A USEFUL INQUIRY

As an inquiry in close relation to others, environmental history can sometimes offer useful practical insights. If we want to deal with environmental problems, it can be a great help to know how they came about in the past. For example, David Neufeld, a Yukon and western Arctic environmental historian reports that in the early 1990s the Canadian Department of Environment was studying Turbot livers in Lake LeBarge north of Whitehorse, Yukon Territory. They found disturbingly high levels of toxins and explored the lake to find the cause. Sediment cores from the lake bottom showed a black sludge of unknown origin. Seeking historical background, they passed the question to Neufeld.

The Yukon River system, of which Lake LeBarge is part, was a major transportation route Neufeld discovered that in the mid-1920s, a large

silver-lead deposit was exploited in the central Yukon. Access was by paddle-wheel river steamers. The most serious obstacle in the spring was the delayed thawing on thirty-mile-wide Lake LeBarge. The British Yukon Navigation Company, the sole operator, devised a strategy to meet the increased demand by lengthening the shipping season rather than investing in new ships. They used a truck to spray a mixture of lampblack, old crankcase oil, and diesel oil (in fact, one informant noted, anything dark and liquid was dumped into the tank), in a lane on the ice across the lake to speed the 'rotting' of the ice. Company records showed that this was an annual practice into the mid-1940s. Steamboats would follow the track through the ice and break it up. The paddlewheel would churn up the lampblack, which settled to the bottom, where it remains to poison turbot today. The nature of the problem was thus revealed, and remedial action was taken. Such an incident reveals a practical application of the study of environmental history.

4. RELATED TO OTHER SOCIAL SCIENCES

However, I would like to return to the first of the two ways in which environmental history can be defined; that is, as an inquiry. As a subject, environmental history is the study of how human beings and human societies have related to the natural world through time. As a method, it is the use of ecological analysis as a means of understanding human history. Environmental historians recognize the ways in which the living and non-living systems of the Earth have influenced the course of human affairs. They also evaluate the impacts of changes caused by human agency in the natural environment.

William Green included a valuable chapter on environmental history in his *History, Historians, and the Dynamics of Change*. Green observes that no approach to history is more perceptive of human interconnections in the world community, or of the interdependence of humans and other living beings on the planet. Environmental history, he adds, supplements traditional economic, social, and political forms of historical analysis. The environment can no longer be seen as the stage setting on which human history is enacted. It is an actor; indeed, it comprises a major portion of the cast.

On the one hand, a fully developed environmental historical narrative, properly speaking, should be an account of changes in human society as they relate to changes in the natural environment. In this way, its approach is close to those of the other social sciences. One good example of this would be Alfred Crosby's *The Columbian Exchange*, which showed how the European conquest of the Americas was more than a military, political, and religious process, since it involved invasion by European organisms including domestic species and opportunistic animals such as rats. European plants, whether cultivated ones or weeds, replaced native ones, and the impact of European microorganisms on the indigenous population was even more devastating than warfare.

5. RELATED TO OTHER HUMANISTIC INQUIRIES

Like history itself, on the other hand, environmental history is also a humanistic inquiry. We environmental historians are interested in what people think about the natural environment, and how they have expressed their ideas of nature in literature and art. That is, at least in one of its aspects, environmental history can be a sub-field of intellectual history. We must pay attention to the question of how attitudes and concepts affect human actions in regard to natural phenomena. But it is also a valid part of the environmental historical enterprise to establish what the significant views were on the part of individuals and societies. One of the finest achievements in this area was Clarence Glacken's *Traces on the Rhodian Shore*, which examined three major environmental ideas in western literature from ancient times to the eighteenth century. Those ideas were that the cosmos is designed, that the environment shapes human beings, and that humans alter the environments in which they live, whether for good or ill.

6. IN A DIALOGUE WITH COMMUNITY ECOLOGY

The final point I want to make is that environmental history derived in part from a recognition of some of the implications of ecological science on the understanding of the history of the human species. Paul Shepard called ecology

"the subversive science," and it has certainly subverted the accepted view of world history as it was up to the mid-twentieth century. Even environmental historians, however, have not always come to grips fully with the implications of ecology, particularly community ecology.

One of these implications is that the human species is part of a community of life. It evolved within that community by competing against, cooperating with, imitating, using and being used by other species. Humankind's continuing survival depends upon the survival of the community of life, and upon achieving a sustainable place within it. History's job includes examining the record of the changing roles our species has enacted within the biotic community, some of them more successful than others, and some more destructive than others.

What needs emphasis is that all human societies, everywhere, throughout history, have existed within and depended upon biotic communities. This is true of huge cities as well as small farming villages and hunter clans. The connectedness of life is a fact. Humans never existed in isolation from the rest of life, and could not exist alone, because they are only one part of the complex and intimate associations that make life possible. The task of environmental history is the study of human relationships, through time and subject to frequent and often unexpected changes, with the natural communities of which they are part.

The idea of environment as something separate from the human, and offering merely a setting for human history, is misleading. The living connections of humans to the communities of which they are part must be integral components of the historical account. Whatever humans have done to the rest of the community has inevitably affected themselves. To a very large extent, ecosystems have influenced the patterns of human events. We have, in turn, to an impressive degree made them what they are today. That is, humans and the rest of the community of life have been engaged in a process of coevolution that did not end with the origin of the human species, but has continued to the present day. Historical writing should not ignore the importance and complexity of that process.

The narrative of history must place human events within the context of regional ecosystems,

and world history must in addition place them within the ecosphere. Granted this, the often-used metaphor of "environment" is also inadequate, implying as it does a separation between the human species and the rest of the natural world. One might, therefore, have preferred another term for "environmental history." Other designations such as "ecological history," "historical ecology," "ecohistory," etc., have been suggested, but all of these also present semantic difficulties, and "environmental history" has the advantage of current acceptance among historians, so I use it here in an inclusive sense, with no intent to imply that humans are exempt from the ecological principles that govern all species. History operates *within* the principles of ecology.

As Aldo Leopold wrote, "One of the anomalies of modern ecological thought is that it is the creation of two groups, each of which seems barely aware of the existence of the other. The one studies the *human community*, almost as if it were a separate entity, and calls its findings sociology, economics, and history. The other studies the *plant and animal community* and comfortably relegates the hodgepodge of politics to "the liberal arts". The inevitable *fusion* of these two lines of thought will, perhaps, constitute the outstanding advance of the present century." I believe environmental history is an active part of that fusion.

7. WRITING IN WORLD ENVIRONMENTAL HISTORY

World environmental history is, of course, the most widely embracing approach to the subject of environmental history, an approach that can potentially erase the greatest number of borders. It is also one of the earliest kinds of environmental history to appear. Richard Grove (1995) has shown that colonial powers sent out scientists, including physicians, as early as the seventeenth century. These scientists noticed environmental changes on oceanic islands, in India, and in South Africa changes so rapid that they could often be chronicled within the span of a human life. They recorded evidence of human-induced deforestation and climatic change. Although as a rule they did not present their findings in formal histories, they at least provided impetus for the idea that humans have caused environmental alterations around the world and

that many of these changes represent not advance, but degradation.

George Perkins Marsh's great work, *Man and Nature*, (1864; 1965), was intended to be a worldwide survey of the ways in which humankind had disturbed nature's harmonies. His familiarity with the Mediterranean countries, Europe, and North America led to an emphasis on those areas.

In the early and middle twentieth century, members of the French *Annales* school, particularly Lucien Febvre, traced the reciprocal influences of human societies and the environment on a global scale. Seeking to broaden the horizon of history, they emphasized the importance of geographical settings, thus providing a formative impulse for world environmental history.

Cross-fertilization between history and the sciences, particularly ecology, produced abundant fruit in world environmental history. This was the thrust of an international symposium at Princeton chaired by Carl O. Sauer, Marston Bates, and Lewis Mumford. Its proceedings, entitled *Man's Role in Changing the Face of the Earth*, edited by William L. Thomas, Jr. (1955), was a seminal collection of essays spanning the planet and the chronological sweep of human history. It laid a foundation for later work bridging science and history. The Thomas volume was emulated and in some ways surpassed by a systematic and authoritative collection, *The Earth as Transformed by Human Action: Global and Regional Changes in the Biosphere over the Past 300 Years*, edited by B. L. Turner II, William C. Clark, Robert W. Kates, John F. Richards, Jessica T. Mathews, and William B. Meyer (1990).

Alfred Crosby's earlier work, mentioned above, including his ground breaking *The Columbian Exchange* (1972), combined medical and ecological science and history to demonstrate the biological impact of Europeans and their domestic animals and plants—and the diseases to which they had developed resistance—on the Americas. He then expanded his purview, as in *Ecological Imperialism* (1994), showing that Europeans toted their "portmanteau biota" to temperate neo-Europes in many hitherto isolated lands, where they achieved demographic takeovers.

Attempts by historians to write environmental histories of the world have been few; not sur-

prisingly, given the relatively recent delineation of the field and the vastness of the subject. An early effort to write a global environmental history was Arnold Toynbee's *Mankind and Mother Earth* (1976), but it was unfinished at the time of the author's death and suffers from several flaws, the most important of which is an extremely cursory treatment of modern history. Despite a promising title and a prefatory section that takes ecology seriously, it remains for the most part a conventional political-cultural narrative repeating observations made in his earlier works. It can be appreciated as a gesture, however. Late in life, Toynbee apparently recognized that his *Study of History* (1934-61) had failed to give ecological process the role it demanded. The later book might be viewed as an incomplete attempt to remedy that defect.

Clive Ponting's *Green History of the World* (1991), a survey of environmental issues through history, begins with the destruction of the ecosystems of Easter Island as a parable for environmental history and proceeds topically. Although his style is journalistic and his documentation inadequate, Ponting touches on most of the salient themes, and his broad knowledge is impressive.

Several collections of articles on world environmental history have appeared. The nature of the subject almost assures that authors from other disciplines will appear among the historians. This is true of Lester J. Bilsky's *Historical Ecology: Essays on Environment and Social Change* (1980), which has pieces representing time frames from the prehistoric through modern, and Donald Worster's choice, *The Ends of the Earth: Perspectives on Modern Environmental History* (1988). My collection, *The Face of the Earth: Environment and World History* (2000), contains only essays by historians. Like Worster's, it is predominantly but not exclusively modern in scope.

The finest recent monograph in the field is John R. McNeill, *Something New Under the Sun: An Environmental History of the Twentieth-Century World* (2000). It is the first synoptic world environmental history of the twentieth century. McNeill traces environmental and related social changes, unique in scale and often in kind, that characterize the period. Where a look at previous times is necessary to understand them, he provides the background. He explains

that present culture is adapted to abundant resources, fossil fuel energy, and rapid economic growth—patterns that will not easily be altered should circumstances change. The engines of change are conversion to a fossil fuel-based energy system, very rapid population growth, and a widespread ideological commitment to economic growth and military power. McNeill includes a perceptive section on world economic integration. This book bids fair to become a classic of environmental history.

My book, *An Environmental History of the World: Studies of Humankind's Changing Role in the Community of Life* (2001), offers a chronological sweep from prehistory to the contemporary. Each chapter consists of an introduction to a broad chronological period, followed by case studies of selected periods and places. My approach emphasizes the mutual relationships between human societies and the ecosystems of which they are a part.

Looking to the future, we can note a forthcoming book in world environmental history. The first is by John F. Richards, with the prospective title, *The Unending Frontier: The Environmental History of the Early Modern World*. It will cover the period between the fifteenth and nineteenth centuries. On its appearance, it should provide, along with McNeill's volume, a comprehensive coverage of the modern scene.

The global must be based firmly on the local. There is also a growing international coterie researching the environmental history of their own regions in Austria, Brazil, Finland, France, Germany, India, Italy, the Netherlands, New Zealand, Portugal, Russia, South Africa, Spain, Sweden, and Switzerland. It is to be hoped that other nations will join this list. An outstanding example of a study of one country that should be taken seriously by all writers on the world environment is *This Fissured Land: An Ecological History of India*, by Madhav Gadgil and Ramachandra Guha (1992). The authors have set their study of the South Asian subcontinent within a compelling philosophy of world environmental history extending from prehistory to the industrial age. A very useful contribution in the future would be the writing of world environmental histories by scholars outside North America, whose viewpoints could offer challenging perspectives.

Environmental history needs to have a place in textbooks on world history. John McNeill asserts that the patterns of human environmental relations are the most important aspect of twentieth-century history, and this is no less true of preceding centuries and millennia (McNeill, 2000:3). Through the past twenty-five years, world history textbooks have given little attention to environmental issues, except possibly in the sections on prehistory and on the late twentieth century. But if, as is likely, environmental historians will increasingly be listed among the coauthors, there is hope that their perspectives will be reflected across the entire time frame of these books that are so important to the undergraduate education of the new generation.

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