

Preface to the Second Edition

In the two decades since publication of the first edition of this book, there has been an explosion in research in historical ecology. Google Scholar sends me notification of one or more new publications that use the term *historical ecology* every day, and the four hundred or so new references in this edition are a small sampling of recent research. New technologies and a recognition that history is an important consideration in conservation decisions have contributed both to interest in the field and to advances in our understanding of the importance of history for influencing current—and future—landscapes and ecosystems. Recent academic meetings have included sessions on historical ecology, and the Frontiers in Historical Ecology Symposium in Switzerland in 2011 featured worldwide research in historical ecology that went beyond case studies, but included these as well. Accelerated change in the global environment over the last century has also stimulated appreciation for the value of looking at the past to help understand how we have gotten to where we are today.

There continues to be a dichotomy between those who view historical ecology from an anthropological point of view and those who view it from the science of ecology. The most recent book with an anthropological perspective on historical ecology describes it as a research framework for studying the “human-environment relationship,” important for designing land management

decisions that are “effective and equitable,” with a focus on specific locations.¹ Environmental history also focuses on the human aspect, especially how interactions with the natural world have affected human history. Most ecologists who do historical ecology, on the other hand, focus more on ecological processes, and how incorporating changing human impacts over time can help explain current processes and patterns. Many ecologists, however, especially in the United States, find it difficult to accept the importance of history to the systems that they study. I hope that the wealth of studies that I discuss in this book will show that historical ecology provides critical insights into the structure and function of ecosystems as well as conservation decisions.

With some regret, I have eliminated the chapter on lakes from this edition. Since the first edition, there have been at least two books devoted to paleolimnology, written by limnologists who understand lake systems far better than I do (two editions of J. P. Smol, *Pollution of Lakes and Rivers: A Palaeoenvironmental Perspective*, 2002, 2008; and A. S. Cohen, *Paleolimnology: The History and Evolution of Lake Systems*, 2003). The *Journal of Paleolimnology* has been publishing specifically historical studies of lakes since 1988. I have incorporated some lake studies in the other parts of the book, but have not delved into detail on lake ecology as I did in that chapter of the first edition.

Most of my research and field experience has been in northeastern North America, where the dominant vegetation is deciduous forest. This has led to much of the illustrative material in the book coming from this biome, though I include many examples of historical ecological research from other continents and other biomes. I hope that the abundance of examples will provide sufficient evidence of the importance of research in these other regions as well as an entrée into the historical ecological literature of these areas. I have focused in the chapter on sediment more on pollen than on other records in the sediment, also because that is where my experience lies. In my defense, I think that pollen is a good character to emphasize, as it gives an apparently simple representation of vegetation surrounding the sedimentary basin, while actually having a very complex relationship with that feature of the environment. The process of translating pollen data into meaningful interpretations of the contributing vegetation highlights the kind of analysis needed for using any sedimentary proxy for the environment.

I originally thought that that revising the first edition required merely updating some references in cases where work had been done on a topic since I originally referred to it. It became abundantly clear to me, though, as I considered changes in the field since the late 1990s, that the fields of historical ecology and environmental history had moved ahead to such an extent that

I would need to do a more extensive rewrite. I have learned a lot in doing the research for the second edition, and I am more convinced than ever that studying ecology without reference to history misses vital insights into the functioning of ecological systems at all scales, from population to global. Similarly, conservation decisions taken without regard to the history of a region may be unsustainable. Based on the outdated concept of “climax vegetation,” they often ignore change in the past.²

This book is organized the same as the first edition, with an introduction to the field followed by chapters on methodology. Subsequent chapters deal with specific factors of human impact and the importance of history for understanding some important current ecological issues. The first four chapters set the stage for the rest of the book; the subsequent chapters to some extent can stand alone, though they do progress from the most long-running human impacts to more recent ones to give a feeling for the pervasive role of people in the environment since the evolution of *Homo sapiens*.

I hope that others will accept the challenge to add depth to their understanding by finding out more about the history of the systems that they study.

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