

Whispers on the Landscape

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Mighty things from small beginnings grow.

John Dryden, "Annus Mirabilis"

During the latter half of the twentieth century, anthropology began to integrate explicit notions of ecology and the environment as central themes in the study of human societies (e.g., McCay and Acheson 1987; Moran 1990; Rappaport 1984; Steward 1977). The theoretical implications of these viewpoints influenced a host of subsequent studies across the subdisciplines of anthropology. In archaeology, such work was key in bringing about the new archaeology (e.g., Binford and Binford 1968) as well as those studies that would presage its development (e.g., Caldwell 1958). This research would also lead to the development of new methods in archaeology (e.g., flotation, fine screening, etc.) to accommodate the growing theoretical interest in human-environmental interactions (see Trigger 2006 for a history).

Ecologically focused anthropological research continues to be a central topic at the start of the twenty-first century, especially in archaeological studies. Recent archaeological literature concerning socio-ecological systems follows several key themes. By far the most predominant subject among these themes relates to impacts that lead to a collapse or destabilization of the human socioeconomic system (Dean 2010; Diamond 2005; Redman 1999; Redman et al. 2004:1). Another theme focuses on the depression of biodiversity and/or the extinction of certain species (James 2004; Kirch 1997, 2004). Finally, the other major theme is the large-scale transformation of environments by intensive agriculturalists and urban societies (Gunn et al. 2004 ; Redman 1999, 2004). These avenues of research are not mutually exclusive, of course, and contribute significantly to our understanding of socio-natural systems.

Historical ecology is one of the more prevalent theoretical frameworks that deals with issues such as those previously mentioned. The purpose of this introduction is to consider the ideas of historical ecology in the context of the study of small-scale societies. That is, how can a historical ecology approach to the study of hunters and gatherers and limited horticulturists inform us about the nature of human-environmental relationships? In order to explore this, I first provide a brief outline of the core tenets of historical ecology and explore its implications for archaeology. My brief review of historical ecology here draws heavily on the works of Balée (1998, 2006), Balée and Erickson (2006), and Crumley (1994a), who have, over the past two decades, worked to define historical ecology as a research program. Next, I discuss the relevance of studies of small-scale economies for the historical ecology research framework. Specifically, I briefly summarize the major themes of other previously published volumes on historical ecology and contrast them with the ones presented here. Finally, I outline and comment on the future of historical ecology with regards to the last three chapters. These final chapters offer both a consideration of the unifying themes of the case studies, as well as broader observations on historical ecology.

Core Concepts

While historical ecology is related to its theoretical predecessors, such as cultural ecology, evolutionary ecology, and behavioral ecology, among others, it differs in a few fundamental ways (Balée 1998:2; Balée and Erickson 2006:3; see also Balée 2006). Specifically, there are two key aspects of historical ecology that set it apart from other frameworks. As defined by Balée and Erickson (2006:1, 5), historical ecology takes the view that humans are a keystone species and thus primary drivers of ecological change. Changes or alterations by humans to the environment can be small or large in scale and can stem from intentional and/or unintentional actions (see Balée 1998). The second key distinguishing aspect of historical ecology is that, in terms of analysis, it takes as its focus the landscape, but also recognizes that such an understanding is only possible by linking together multiple scales of analysis that range from the local to the regional (Balée 1998; Balée and Erickson 2006:12; Crumley 1994b:10, 2007:16–17; Erickson 2008:158). This explicit focus on multiple temporal and spatial scales sets it apart from other theoretical frameworks.

While historical ecology built upon the theoretical base of ecological

anthropology, its more nuanced approach to human-environmental interactions, outlined previously, has elicited a major movement in archaeology. Indeed, use of this framework is becoming increasingly common among researchers interested in central problems regarding issues directly related to human impacts, management of past ecosystems, baselines for contemporary ecosystems, and human agency.

The development of historical ecology as an organizing structure is impacting the way in which archaeologists think about the past. Specifically, this has resulted in three main developments: addressing the relevance of past baseline studies of ecosystems; understanding that research must encompass the totality of its subject; and, finally, realizing that humans are agents of environmental change and management. While these three developments were, to varying degrees, already present in Americanist archaeology, it was only with the inception of historical ecology that they became explicitly articulated with ecology and the environment.

The first major impact of historical ecology was its forcing archaeologists to consider the implications of their research beyond reconstructing past life ways. Specifically, historical ecology forces us to reflect on how archaeological research comes to bear on problems and issues facing contemporary ecosystems and the role of humans in the management of such ecosystems. The most obvious contribution of such studies is that they provide baseline data on how these ecosystems changed over time, and the nature of the impact that humans had in shaping these systems.

One example of this is Erlandson and Rick's (2008) edited volume, *Human Impacts on Ancient Marine Ecosystems: A Global Perspective*, which exemplifies studies of past impacts and key baseline studies for modern ecosystems. In their introduction to the case studies, they argue that we can learn much from the past regarding our understanding of contemporary environments. In fact, there is much evidence to suggest that human populations have impacted the distribution, size, and population structure of many marine species (Erlandson and Rick 2008:5). These case studies go on to demonstrate how and to what degree humans have impacted these ecosystems. Further, such research illustrates how attitudes toward modern fisheries have changed in recent years. The ocean was once thought to be a vast inexhaustible resource; however, we are now beginning to appreciate the fragility of ocean and coastal ecosystems (Jackson et al. 2001; see also Erlandson and Rick 2008). This realization comes not only from studies of modern ecosystems, but is also based on research of past societies.