



Preface

Peter E. Siegel

Islands are ideal settings for investigating linked historical processes of colonization, human-induced habitat modifications, effects of plant and animal introductions on native landscapes, and socionatural landscapes as evolving systems (Broodbank 2000; Burney 1997a; Clark, Leach, and O'Connor 2008; Fitzhugh and Hunt 1997; Fitzpatrick and Keegan 2007; Keegan and Diamond 1987; Kirch 2011; Kirch and Hunt 1997; Newsom and Wing 2004; Patton 1996; Terrell 1997). Why and how people migrate are questions that transcend the boundaries of anthropology, sociology, political science, economics, geography, and history. Numerous pushes and pulls have been cited as causal, depending on interrelated factors of demography, environment, economy, politics, ideology, and historical circumstance (Anthony 1990, 1997; Chapman and Hamerow 1997; Fix 1999; King 2007; Manning 2005; Rockman and Steele 2003). Do people move because they want to or because they must? Do they go in large groups, entire villages, family groups, or in age-grade cohorts? In cases of expanding or colonizing populations, to what extent did people modify landscapes, and, perhaps introduce new species of plants or animals? In establishing new colonies, people brought knowledge of previous environments and ways of coping with them. This background information undoubtedly was a resource and filter through which colonists viewed characteristics of new territories. Do people try to reproduce their homelands in new places? Are colonization processes different for people moving across expanses of mainland compared to islands? Finally, what are the dynamics of people moving into places already occupied by others, compared to situations of first settlers?

Human–environment relations have been the subject of inquiry in the social and natural sciences for decades (Bennett 1976; Butzer 1982; Claiborne 1970; Colten 1998; Goudie 2000; Norwine 1978; Redman 1999; Tickell 1977). Over the years, the theoretical pendulum has swung from viewing the environment as the passive recipient of human ac-

tivities to one where environment molds the nature of social formations (Butzer 1996; Kidder 2006; Meggers 1954, 1995). Viewpoints are diverse in a number of arenas, ranging from basic research on climate to governmental policy statements; this is attested by opening almost any recent issue of *Science* or *Nature*. A more realistic perspective sees the relationship between environment and culture in a synergistic context (Balée 2006; Balée and Erickson 2006a; Crumley 1994a; Gunn 1994; McIntosh et al. 2000; Redman 1999, 2005; Russell 1997; Scarry and Steponaitis 1997; van der Leeuw and Redman 2002). That is, humans have in the past and continue today to modify the environment, whether by design or not (Roberts et al. 2017). Environmental settings are very real physical contexts at given moments in history that people consider when making large or small decisions, at scales ranging from the individual to the family to the nation. Debates in archaeology, climatology, and public policy center on the nature of the synergy between humans and environment. It is this synergy that we are addressing over eight millennia of human occupations in the Caribbean.

We are building on the principles of historical ecology as they have been applied most prominently in continental settings (Balée 1998a, 2006, 2013; Balée and Erickson 2006b; Crumley 1994b). As such, our interdisciplinary project has been explicitly directed to identifying and characterizing “human-mediated disturbance[s] as a [form] of landscape transformation” (Balée 2006: 75) across a broad range of tropical and subtropical island settings in the Caribbean archipelago. Approximately eighty years of archaeological research in the Caribbean reveals continuous human occupations over the past four thousand to eight thousand years, depending on which portion of the archipelago is under consideration. Within this temporal range, it is crucial to consider multiple colonization events, and their underlying processes, in regard to one or more surrounding mainland areas.

Organization of the Book

We address island ecologies from the perspective of social and cultural interventions over the full range of human occupations. The case study centers on the islands between Venezuela and Puerto Rico, the locus of the West Indies that experienced the longest continuous series of occupations, spanning eight thousand years. The book is divided into three parts. Part I addresses the larger theoretical issues of human migrations, colonization processes, and notions of landscape learning. These issues will be considered in the context of archipelago settings and the

unique challenges faced by humans in colonizing islands. To provide a comparative perspective, a chapter is included that reviews the Pacific and Mediterranean islands in terms of colonization processes and cultural developments. The archaeological framework for the current case study is then presented. Part I closes with a chapter detailing the methods used in our fieldwork and analysis.

The West Indian case study is presented in part II in a series of chapters authored by project members. Each island selected for research receives a single chapter detailing project results and implications, which are integrated with other relevant paleoecological and archaeological investigations. These chapters are organized consistently, thus allowing for comparisons across the broad range of island ecologies.

Finally, part III begins with a synthesis of the case study results and contributions made to Caribbean archaeology and historical ecology. The first chapter in part III includes a discussion addressing larger issues of colonization and landscape learning illuminated by the case study. A model for human–environment relations in an archipelago setting is offered, articulating with other seminal studies in the field (e.g., Kirch 2000, 2011; Kirch and Hunt 1997; Patton 1996). The book closes with a chapter by John Cherry, a senior scholar who has devoted decades to a career in Mediterranean island archaeology, colonization, and interisland interactions. More recently he has been working on Montserrat, one of the islands in the Lesser Antilles. As such, Professor Cherry brings the perspective of an outsider and insider to the issues and findings discussed in the preceding chapters and addresses future lines of research in island historical ecologies.

Audience

There are very few synthetic book-length case studies available in island historical ecology. A number of books have been published with single-chapter case studies and general overviews of island archaeology (Clark, Leach, and O'Connor 2008; Kirch and Hunt 1997; Papadopoulos and Leventhal 2003; Rainbird 2007). Patrick Kirch and his Biocomplexity in the Environment team have “sought to move beyond” what they call “a narrowly descriptive, qualitative ‘historical ecology’ (Kirch and Hunt 1997) toward testable, dynamic, quantitative models that incorporate feedback processes, thresholds and nonlinearities, selection, risk, uncertainty, and vulnerability” (Hawai’i Biocomplexity Project Team 2010: 164). Kirch (2010b) and his team certainly have been conducting a magnificent well-controlled investigation into the inter-

dependent dynamics of the physical environment, human demography, agricultural intensification, and social complexity over thousands of years of human occupations in the Hawai'ian Islands. However, I would not level the charge that the perspective from historical ecology is "narrowly descriptive" or necessarily and solely "qualitative." There are many historical ecology studies that are expansively analytic and quantitative in addressing a range of issues, including biodiversity (Balée 1998b, 2013), fire and vegetation histories (Athens 1997; Parkes 1997; Pyne 1998), food production (Zent 1998), landscape changes (Allen 1997; Kirch 1997a), and animal exploitation and extinction patterns (Anderson 1997; Orliac 1997; Steadman 1997). (See also studies in Balée and Erickson 2006a.)

We are building on the insights and approaches pioneered by others in the field of island historical ecology by presenting a strategically organized book-length case study, which allows for broad global comparisons and the generation of new insights and hypotheses. The book will be of broad appeal to scholars, graduate students, and advanced undergraduates with interests in historical ecology, environmental studies, historical geography, human impacts to landscapes, synergistic approaches to environmental research, island ecology, island archaeology, processes of human colonization and migration, pollen and phytolith analysis, soil science and geoarchaeology, and Caribbean archaeology and ecology.