

## Virginia D. Nazarea, Robert E. Rhoades, and Jenna E. Andrews-Swan (eds.): Seeds of resistance, seeds of hope: place and agency in the conservation of biodiversity

The University of Arizona Press, Tucson, Arizona, 2013, 289 pp, ISBN: 978-0-8165-3014-4

Ashlee M. Adams<sup>1</sup>

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Inserting itself into the diffuse and highly contentious debate concerning the most effective means of global biodiversity conservation, this book provides a fuller view of how conservation is practiced, providing ample evidence of success. It proves timely in offering a multitude of perspectives on the issues facing preservationists, climbing down from the ivory tower of academia and getting its hands dirty to dig into the places where biodiversity conservation flourishes.

As a compilation of case studies from around the US and the world, it demonstrates the irrepressibility of human will in recovering and replenishing 'lost' varieties of culturally revered plants. Through "authoring and anchoring place" (p. 13), this work argues that intimate ties to the land through historical legacy and especially through memory ground everyday conservationists and motivate them to produce and reproduce the cultural and historical narratives of native, heirloom food crops. Food embeds itself in individual and collective memories and through the cultivation of these foods, the people who preserve them also (re)member and cultivate identity. From Vietnamese immigrants in Chapter 12 and Cuban exiles in the US (Chapter 11), to indigenous farmers in the Americas (Chapters 4, 5, and 7), Black Colombian coastal groups (Chapter 6) and Cherokee tribes of the American South (Chapter 3), the quotidian actions of peoples marginalized from the mainstream constitute a profound political act of resistance. Completing the milieu of conservation perspectives, this work also offers a chapter (9) on international law that shapes biodiversity conservation globally and to some extent galvanizes resistance.

But, resistance to what exactly? Reflecting the complexity of biodiversity and conservation approaches outlined across the chapters, the response to this question is not given explicitly. The book's editors are careful not to give a concrete or inflexible definition of resistance, instead choosing to provide a general idea of how resistance is lived and the typical conditions that catalyze resistance. Through the chapters we are to understand the forces of globalization, agricultural industrialization, and botanical homogenization as the greatest threats to biodiversity in food crops as described by the contributing authors. The leviathan that is the capitalist system of provision imperils the specific varieties that have cropped up under the care of their human stewards, deeply influenced by the idiosyncrasies of distinct places.

The title of this work begs another important question. How are place and agency implicated in biodiversity conservation? To this question the book provides a resounding answer that where biodiversity exists is indispensable to how it can be preserved. That is to say, conservation is not a predetermined set of prescriptions, but rather must take into consideration the social, ecological, political, economic, and cultural contours found in specific places. Contributing authors take up modes of conservation including ex situ (fortress style conservation in seed banks), in situ (conservation through continual cultivation or preservation of wild spaces), in vivo (living conservation), and trans situ (transplants of immigrants to new homes). Evincing a sense of "geopiety" (p. 245), (in)voluntarily displaced and marginalized people propagate a reterritorialization by planting the foods that they remember from their childhood, from their family, from their homeland.

Ashlee M. Adams ama354@psu.edu

Department of Geography, Pennsylvania State University, 330 Walker Building, University Park, PA 16802, USA

One of the book's greatest successes stems from the incorporation of diverse voices coming from multiple educational and experiential backgrounds, countries of origin, methodological approaches, and academic disciplines, all illuminating the contemporary belief that conservation of biodiversity does not take a singular form, especially if it is to achieve its goals. Contributing authors include prominent members of the American academy, their counterparts from institutions in other countries, public school teachers, practitioners, indigenous conservation leaders, executive directors, and conservation leaders from indigenous groups of the American South, Northern Ecuador, and the Peruvian highlands. It includes case studies from Chiapas, Mexico, the Southern United States, Japan, Ecuador, the Colombian coast, and the central Andes of Peru.

Incorporating a symphony of voices, chapters also take up multiform methods. Running the gamut from the strict scientific rigor of the academy to translated narratives of highland native peoples of Chiapas, Mexico and the Potato Park, Peru, this volume clearly shows that not only can conservation take many shapes, but the ways it is studied also vary immeasurably. Chapter 10 develops a relatively new methodology, 'photovoice', which allows for various actors within a system to illustrate their world views through imagery, rather than the spoken word. While this novel approach remains underdeveloped, lacking a refined analytical framework, it is successful in enlightening the reader to the ways distinct populations construct meaning and understanding. Few weaknesses can be found in this edited compilation. While it offers a diverse array of perspectives, it does rely too heavily on case studies from the United States and Latin America, ignoring biodiversity in Africa or Eurasia. Including one case study from Japan, elucidating the example of soybean diversity in Japanese culture, is insufficient in documenting global diversity and resistance. While the collection is generally clearly and convincingly written and well-organized, the chapter on soybeans departs from the overall quality of the book by struggling to capture the well-developed themes of agency and conservation found throughout the volume.

Overall, this is an excellent edited assemblage of conservation case studies that captures our attention and imagination. It uncovers both hidden, covert resistance to homogenization and the classic examples of conservation efforts. It echoes the foundational concept found in general conservation theory, paralleling the nostalgia for place and identity, with pristine nature set as an idyllic baseline. I recommend this book as an introduction to biodiversity conservation for neophyte practitioners as well as students new to conservation literature. It may also serve well as a collection of case studies for seasoned scholars, practitioners, and policymakers.

Ashlee M. Adams is a Ph.D. student in the Department of Geography at The Pennsylvania State University. She is beginning doctoral work on the political ecology of niche commodities in Bolivia and Peru.