



THE NEW YORK BOTANICAL GARDEN



Review

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Source: *Economic Botany*, Vol. 58, No. 1 (Spring, 2004), pp. 124-125

Published by: [Springer](#) on behalf of [New York Botanical Garden Press](#)

Stable URL: <http://www.jstor.org/stable/4256791>

Accessed: 21-04-2015 03:35 UTC

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anticipate the availability of this additional work. If it is anything like its predecessor, however, it will undoubtedly be well-received by botanists working on the North American continent.

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Enduring Seeds. Native American Agriculture and Wild Plant Conservation. Paperback Edition. Gary P. Nabhan. 2002. University of Arizona Press, 355 S. Euclid, Suite 103, Tucson, AZ 85719. xxvii + 225 pp. (paperback). \$19.95. ISBN 0-8165-2259-6.

Miguel Altieri's Foreword to the second edition of Nabhan's seminal *Enduring Seeds*, originally published in 1989, includes a compelling homage to indigenous knowledge. People of the land have continuously cultivated maize, cucurbits, and edible greens for millennia. One of the salient features of their traditional farming systems is the high degree of biodiversity. These traditional farming systems have emerged over centuries of cultural and biological evolution, and they represent the accumulated experience of indigenous farmers interacting with the environment without access to external inputs, capital, or scientific knowledge. Using inventive self-reliance, experiential knowledge, and locally available resources, traditional farmers have often developed farming systems with yields that have stood the test of time.

Nabhan's survey documents inventiveness by Native American farmers facing problematic environments. These agroecosystems can be seen as a continuum of integrated farming units and natural or semi-natural ecosystems in which foraging and farming are actively pursued. Plant resources are usually directly dependent upon management by human groups; thus they have evolved in part under the influence of cultivation practices shaped by particular cultures and the array of sophisticated knowledge they represent.

Altieri asserts that: "Today it is widely accepted that indigenous knowledge is a powerful resource" itself. Nabhan suggests that, in studying such systems, it is not possible to separate the study of agricultural biodiversity from the study of the culture that nurtures it. As traditional agriculture is disappearing because it faces major social, political and economic changes, preservation of traditional agroecosystems must occur in conjunction with the maintenance of the culture of the local people. Conservation and management of agricultural and biodiversity is not possible without the preservation of cultural diversity. "Traditional agriculture is the cradle of agrobiodiversity, plays a key role in ensuring food security, preserves soil and water, and

is resilient to natural disasters especially climate change, over which indigenous and peasant farmers have no control."

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The Lowland Maya Area. Three Millennia at the Human-Wildland Interface. A. Gómez-Pompa, M. F. Allen, S. L. Fedick, and J. J. Jiménez-Osornio (eds.). 2003. Food Products Press, an imprint of The Haworth Press, Inc., 10 Alice Street, Binghamton, NY 13904-1580. xxx + 659 pp. (paperback). US\$ 79.95. ISBN 1-56022-917-3.

Expansive is a word that comes to mind when describing Gómez-Pompa's extensive collection of chapters describing Yucatán culture and ecology. Spanning three millennia and five countries *The Lowland Maya Area* is a book whose scope is as broad as the title suggests, integrating research examining the biotic, anthropological, meteorological, and geological forces that have made the Mayan lowlands what they are, what they were, and what they will be.

What coheres the 659 pages of this book, aside from the geographical focus on lowland Mesoamerica, is the Maya's human-ecology interactions, and how they precipitated and survived the large-scale growth, zenith and decays of this dynamic civilization. The authors go beyond proposing reasons for the decline of the Maya, citing copious research on Mayan lifestyle and conservation practices that have applications for modern land-use management practices.

The book's first two sections provide an overview of the region's environment and biodiversity, generally spanning the history of human occupation. The vast majority of this research was conducted in the *El Edén Ecological Reserve* in Northern Quintana Roo. While the reserve represents "all major ecosystems of the area," data comparing the Yucatan with lowland Maya areas in present-day Guatemala, Belize, Honduras, and El Salvador would have made this work more representative of the region as a whole.

Next, the book presents Mayan agriculture, largely from an historical and archeological perspective, analyzing Henequen and Cacao production, and discussing archeological evidence for wetland use and fertilizers. The following section, "Plants and People," is an eclectic assortment of cognitive ethnobotany, economics, and conservation efforts. This section's focus on recent and present-day Mayan communities is a pleasant contrast to the previous section's historical accounts.

The book closes with a glimpse at the future of lowland Mesoamerican forests, highlighting restoration, agroecology, and environmental education programs

advocating sustainable use and participatory research. A final summary of recommendations synthesizes the collective effort and suggests how the Mayan lowlands and *El Edén* might serve as an example of long-term human-ecology interaction.

The editors have borrowed from a truly interdisciplinary cross section of knowledge and compiled it into a logical and accessible volume. Although a glossary of Spanish and Maya words would have made the book a bit friendlier, a detailed table of contents and index create an easily navigable reference. *The Lowland Maya Area* would be a useful reference for any student, researcher, or development worker with an interest in the region.

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Bejucos y Plantas Trepadoras de Puerto Rico e Islas Virgenes. Pedro Acevedo-Rodríguez. 2003. Smithsonian Institution, MRC-166, Washington, DC 20560. To order, contact the author by email: acevedo.pedro@nmnh.si.edu. ii + 491 pp. (paperback). \$30.00, including shipping. ISBN 0-9743280-0-6.

For all those who know Pedro's other recent book (*Flora of St. John U.S. Virgin Islands*. The New York Botanical Garden, Bronx, NY, 1996), the quality of this new volume will be no surprise. This attractive and well-researched book lives up to the standards he set with that other contribution. Moreover, Bobbi Angell, who illustrated Pedro's first book and Scott Mori's *Guide to the Vascular Plants of Central French Guiana* (The New York Botanical Garden, Bronx, NY, Part 1, 1997, Part 2, 2002), also did the line drawings for this book. That is another big plus for the quality of workmanship.

Some will consider the fact that this book is in Spanish a drawback. Others of us relish books in that language. For those who do not read Spanish, it will be easy enough to use the keys and descriptions by relying on words cognate with scientific English.

The book is laid out much like a scientific paper. It begins with a *Resumen/Abstract*. That is followed by an *Introducción* which includes general comments on morphology of stems in climbers, mechanisms of climbing and holding, and diversity and distribution, and methods. Then there are the acknowledgments, general references, and the systematic treatment. This is followed by a list of the specimens studied, those used to make the drawings, a glossary, an index of scientific names, and another to common names. In this time of a publisher's tendency to put photographs

and biographies of authors on dust covers, the inclusion of this on p. 491 is a pleasant surprise.

The introduction contains a series of black and white photographs showing some of the variations on the anatomical tricks that climbing plants have used to support their mass. There is a plate of line drawings of the methods used to climb and attach plants to their supports.

The systematic segment includes keys to larger divisions and then within, keys to each species. Each of the 386 species treated is illustrated with a line drawing, and we are told that the text covers 65 families and 187 genera. Some 278 are native, 34 endemic, 64 naturalized, and about 49 cultivated.

There is not an abundance of material directly addressing economic botany in the book. However, there are lists of common names for the species in Spanish, English, and sometimes other languages that should be of interest. For readers of this journal, the great value of this study will be the detailed illustrations that accompany the identification aids of keys, descriptions, and ranges. Many species have detailed dissections of living flowers along with habit sketches. For each species, the description is followed by phenology, status (exotic, cultivated, escaped, native, endemic, etc.), distribution within Puerto Rico and the Virgin Islands, and elsewhere in the world. This is followed by public forests where the species has been found. Families have selected references in addition to the general citations given earlier.

Although there are not many of us who revel in plants with climbing life-forms, few are enthusiastic enough to name their children after them. Pedro Acevedo is one of two people I know of with a daughter named "Liana." That enthusiasm for plants comes through on each page of this valuable and pleasingly produced book. For everyone interested in plants, this is a steal at the price!

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Na Msu'u kia 'i Kwara'ae/Our Forest of Kwara'ae. Michael Kwa'ioloa and Ben Burt. 2001. The British Museum Press, 46 Bloomsbury Street, London, WC1B 3QQ Great Britain. 260 pp. (paperback). £24.00. ISBN 0-7141-2533-4.

Kwara'ae is the largest cultural group in the Solomon Islands with great national influence. Kwara'ae territory extends as a band across the island of Malaita with traditional communities primarily focused upon inland and upland agriculture and arboriculture. The Kwara'ae language has long served as the most important indigenous language for discussion of plants