

of the case studies resides in how and why participatory approaches succeeded in location- and culture-specific contexts. In this regard, the chapters providing background on ethnicity, history, and geography are the ones that succeeded best. Though the editors tried to overcome jargon and institutional naming with the addition of an acronym appendix and a glossary, overuse of acronyms and jargon in some chapters also weakened the book's readability.

These relatively minor criticisms aside, this is a useful book for ethnobiologists and other experts specializing in the area of plant genetic resources, and especially for those people who are working or planning to work in the area of agricultural development in less developed countries. The book confirms that many of the theoretical, ethical and methodological positions fashioned by ethnobiologists over the last 20 years are beginning to influence professionals in other disciplines. At the same time it also provides many useful tips for field-oriented PGR conservation and agricultural development specialists as they plan and implement their own interventions.

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**Mayo Ethnobotany: Land, History, and Traditional Knowledge in Northwest Mexico.** David Yetman and Thomas R. Van Devender. University of California Press, Berkeley. 2002. Pp. 359. Illus.; scientific, Mayo and Spanish name lists; index. \$48.00. ISBN 0-520-22721-2.

A valuable resource for ethnobotanists in northwestern Mexico, this book provides a detailed account of plants used by the Mayo of Sinaloa and Sonora, Mexico. According to the authors, this arid region is losing both its biological diversity and traditional plant knowledge. Their book does a great service by increasing the reader's awareness of indigenous plant knowledge in general and the sophistication of Mayo plant knowledge in particular. The first third of the book is dedicated to Mayo history, culture, and biophysical landscapes, and the remainder lists the ethnobotanical information compiled by the authors over a ten-year period.

The chapters on Mayo ethnography and history are interesting and well written, but leave the reader with only a taste of the complex political and cultural ecologies that characterize landscape and knowledge change in northern Mexico. The title of the book led me to expect more historical ecology and biocultural synthesis, but this book is really a text of economic botany with an ethnographic introduction to the Mayo region. The authors do deliver discussions on land (vegetation and ecotypes), history (political and economic), and traditional knowledge (botanical), but these are presented as separate entities. All the elements are there but, for the most part, the connections amongst them are left for the reader to make.

The few glimpses of biocultural synthesis that are provided do keep the reader interested. For example, the discussion of landscape transformations from pro-

ductive pitahaya cactus (*Hylocereus polyrhizus* Britton & Rose) fields to bulldozed buffelgrass (*Pennisetum ciliare* (L.) Link) plantations (and associated erosion of traditional plant knowledge) is an excellent illustration of how economic and politico-historical forces propel change in biophysical and sociocultural spheres. The reader comes away with a good understanding of the native ecotypes of the Mayo region (coastal vegetation, coastal and foothills thorn scrub, tropical deciduous forest, oak woodlands and riparian zones), but much of this information, including some of the photographs, has already been published in Martin et al. (1998). The brief discussion of Mayo plant classification is disappointing and would have been better left out. The authors failed to discern a taxonomic system during their research, and go so far as to say, "[w]e now believe that such a system is not to be found among Mayos" (p.129). The methods they mention having used, however (translating names into Spanish, and noting comments regarding relatedness), are not enough to get at any deeper structure. Pile sorts and triad tests would surely have shed some light on this issue.

The chapters "Historical and Contemporary Mayos" and "Eight Plants that Make Mayos Mayos" are stimulating and evocative. They allow the reader to approach an understanding of the links and relationships of human—plant systems of the Mayo, but the book as a whole falls short of providing comprehensive ecological understanding of these relationships. That said, the book is a fun read, accessible to students and aficionados, and an important resource for ethnobotanists, anthropologists, and ecologists interested in arid and coastal lands.

The last and longest chapter, "An Annotated List of Plants," is the heart of the book, providing plant descriptions, uses (in the categories medicine, construction, artifacts, livestock, industry) and names in Latin, Mayo and Spanish, in order of plant family. The bare facts are enriched with anecdotes, observations and comments made by the authors or their Mayo consultants, which makes this list an exceptionally readable, interesting and useful reference tool. One frustrating aspect of the naming of plants here and throughout the book is a lack of differentiation in type style or markings (or inconsistent differentiation) between Spanish, Mayo and English words. Luckily, there is an appendix with thorough and cross-referenced lists of plants in each language, plus a glossary.

The text also considers intellectual property and indigenous knowledge. The authors do a good job of giving credit to their Mayo teachers and consultants, with references throughout and an appendix listing the names of consultants along with brief biographies. It is unclear, however, what kind of consultation was made with individuals or communities regarding the future publication of names of consultants and names and uses of Mayo plants, some of which could be utilized by non-local commercial interests. This places *Mayo Ethnobotany* in that zone of ethical ambiguity that so many of us are trying to navigate through: weighing the value against the dangers to the Mayo community and the scientific community at large of recording and publishing indigenous plant knowledge. If, as the well-presented case is made in this book, Mayo landscapes and traditional knowledge are endangered, this publication is important as salvage ethnobotany. But to be truly useful to future generations of Mayo residents of the thorn-scrub coast, this compilation of plant knowledge should be translated into Spanish—or better still, Mayo—and made available in local communities.

*Mayo Ethnobotany* is as an important contribution to the growing body of research on arid lands ethnobotany and I recommend it for people working in northwest Mexico who want to learn about its plants and people. The text would also be useful as a preliminary case study for human-plant systems undergoing major ecological transitions.

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#### REFERENCE CITED

Martin, P.S., D. Yetman, M. Fishbein, P. Jenkins, T.R. Van Devender, and R.K. Wilson, eds. 1998. *Gentry's Rio Mayo Plants: The Tropical Deciduous Forest and Environs of Northwest Mexico*. University of Arizona Press, Tucson.

**Fire, Native Peoples, and the Natural Landscape.** Thomas Vale (ed.). Island Press, Washington, D.C. 2002. Pp. 238, maps. \$50.00 (cloth) ISBN 1-55963-888-5; \$25.00 (paper) ISBN 1-55963-889-3.

With a nod towards environmental determinism, the geographers who have contributed chapters to this book set out, in the word chosen by the editor, to "demythologize" the variably emphasized claims that hunting-gathering societies made significant impacts in using fire in much of the American West. The stated aim of the book as presented by Vale in the first chapter is reasonable enough: to achieve a "middle ground" between the polar positions that North America was an "untouched wilderness" and the counter claims that it was a "humanized landscape."

The outcome, however, is something quite different from a middle ground, and worse, the overall analysis is flawed. The authors conclude that except for the very limited areas of agriculture in the Southwest, indigenous people made little impact on the "natural landscape." As Vale states in the final sentence of the concluding chapter, it was "an American wilderness—a natural landscape—[that] greeted the first Europeans." This is quite different from what Thomas Bonnicksen, an acknowledged authority on forest ecology, concluded in his recently published book, *America's Ancient Forests: From the Ice Age to the Age of Discovery* (2000: 259): "Native Americans helped to create and sustain the ancient forests that Europeans found beautiful enough to set aside in national parks."

Vale, in making his claim against what he calls the "arm-waving, careless generalizations" made by "anthropologically minded observers," is apparently unaware that few anthropologists know about, much less would support, the idea that hunter-gatherers increased the abundance and influenced the distribution of natural resources. As taught to anthropology students, environmental manipulations do not occur until people take up farming.

Indeed, the seminal thinking about hunter-gatherer uses of fire comes out of Vale's own discipline, and only later influenced anthropologists like Omer Stewart. Stewart took seminars from the geographer, Carl Sauer, during the 1930s while