

At the Desert's Green Edge. An Ethnobotany of the Gila River Pima. Amadeo M. Rea. University of Arizona Press, Tucson. 1997. Pp. xxvii, 430. \$60.00 (hardcover). ISBN: 0-8165-1540-9.

"We didn't think of it as desert back then.... It was paradise, paradise." — a Pima elder. *At the Desert's Green Edge* is, to me, an ideal or "type" ethnobotany. Many words come to mind as I grapple with trying to convey to potential readers the essential nature of this book: monumental, detailed, compelling, fascinating, rich, thorough, authoritative, personal, poignant. It is all of these and more. It will at once serve as a reference book, an ecological and ethnobiological text book, and a story book. The book is full of rich detail about plants and their human relationships, and provides us with many ecological lessons and much ecological wisdom. It also tells us a story, a story of a healthy, functioning riverine ecosystem and how it was transformed and degraded over time into a dry wasteland. The story relates, with many fascinating historical notations and personal accounts, how the ecosystem held a people and their language and culture in a tight mutual embrace. It is a story told with gentle humor and deep appreciation, and sadness. It tells about a strong, happy, gentle, and generous people who were nourished by a diverse and healthy diet. They worked hard, and they enjoyed the "fruits" of the desert and the river that ran through it. Then, their lives were altered as newcomers came and wrought changes to their river. This story has an essential message, which reverberates through almost every North American environment and indigenous culture, and is captured in just one word: over-exploitation. The river died from overuse of resources. Trappers killed off the beaver in its upper reaches. Loggers and miners denuded the fragile semi-arid uplands of the forest cover that held back the waters from sporadic but torrential rainstorms. Ranchers' livestock overgrazed the native grasses and other plants. Farmers diverted the river to irrigate their crops. Today, where once you could hear the Redwing Blackbird calls reverberating over vast expanses of tule, willow, reed grass, and other moisture-loving plants, there is a disturbed, parched wasteland: ecological poverty.

And the people? Their humor and spirit have endured, but they have lost much of what they had because their culture and language are tied to the land. The river was their "economic backbone." Their cultural system actually increased the density and biological diversity of the ecosystems they inhabited. Now, their way of life has changed markedly. Their diet has changed, too, and generally not in a positive way. Obesity is a real problem, and these people now have the highest incidence of late onset diabetes of any population in the world. This book, with its carefully documented account of a people and their plants, is a monument to a past way of life and the knowledge system that supported it. It begins with a thoughtful Foreword by Rea's friend and colleague Gary Paul Nabhan, himself an award winning author and ethnobiologist. Each chapter is introduced with a relevant quotation that captures the message of the contents. After the Introductory part, the book is divided into two major parts: The Pima and their Country; and Gila Pima Plants. Part 1 is comprised of chapters on the Gila Pima people and culture, the Pima consultants whose knowledge Rea has incorporated in the book, the historic habitats and historic events that changed them, the Pima cultural ecosystem, the loss of the river, the habitats of today, dietary reconstruction, and Pima words for mapping the natural world. The Piman terms used throughout were checked by Piman linguistic

consultant Culver Cassa, a biologist and ethnobiologist in his own right. Part 2 includes first an account of Piman folk generics, and then a systematic listing of formally named plant species, under the major Piman life form taxa: "plants growing in or on the water"; "plants standing in the river, emergents"; "grasses, grassy plants, forage plants, hay"; "bushes"; "trees"; "eaten greens"; "wild annuals"; "cactus-like plants"; "crops, planted things"; "planted fruit trees"; miscellaneous unaffiliated plants; and unassigned organisms that are not "things that grow up". Several appendices, a bibliography and index complete the opus. The plants are illustrated by Takashi Ijichi with *sumi-e*, Japanese ink paintings, which capture amazingly the essence of each plant with seemingly few carefully placed strokes. The species I was familiar with were instantly recognizable from these paintings, yet when I tried to identify the individual aspects of the illustration that distinguished one plant from another, I found that the strokes, textures, and shades of gray to black were so subtly blended that I could only marvel at the overall effect without ever being able to analyze the parts. The book is also illustrated with photographs, maps, and line drawings of plants with Piman names and botanical terminology. Amadeo Rea, ornithologist and ethnobiologist, is a founding member of the Society of Ethnobiology. Formerly a curator of birds and mammals at the San Diego Natural History Museum, he is currently a private consultant. He has worked on the Gila River Indian Reservation for over three decades, documenting with his Pima colleagues the rich knowledge and understanding of the plants and animals of their desert homeland. He is also author of a book on the disappearing Gila River ecosystem, *Once a River* (Rea 1983). Like all books of this magnitude, this one had a few minor flaws, which are irksome to a meticulous and careful author like Dr. Rea. For example, a series of flawed diacritical markings, correct in the page proofs, occurred on p. 88 in Figure 8.8, as a result of a printer's misreading (see Erratum, following this review). There is a mere scattering of other typographical errors but few others that would misinform the reader. It is not surprising that the book won the National Association of Academic Presses award for design as well as the 1998 Klinger Book Award from the Society for Economic Botany. This is a book that sets a standard that will be difficult to surpass.

Erratum: Rea, Amadeo M. 1997. *At the Desert's Green Edge*. p. 37, Figure 3.2: "Sand Tank Mountains" should read Santan Mountains. The Santan Mountains are north of the Sacaton Mountains, not west of Table Top Mountains as labeled. page 88, Figure 8.8.: *chuudagr ch-ek ha'ichu vuushdag* should read: *chuudagŷ ch-eđ ha'ichu vuushdag*; *akimel ch-ek ha'ichu keekam* [sing.] should read: *akimel ch-eđ chuuchim* [pl.]; *iivagr* should read: *iivagŷ*.

LITERATURE CITED

REA, AMADEO M. 1983. *Once a River: Bird Life and Habitat Changes on the Middle Gila*. University of Arizona Press, Tucson.

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