southern Colombia in Bot. Mus. Leafl., Harvard Univ. 10:301-324.

_____. 1957. The identity of the malpighiaceous narcotics of South America in Bot. Mus. Leafl., Harvard Univ. 18:1-56.

_____ and A. HOFMANN. 1973 and 1980. The Botany and Chemistry of Hallucinogens. Ed. 1 and Ed. 2 Charles C. Thomas, Publisher, Springfield, Ill.

SPRUCE, R. 1908. On some remarkable narcotics of the Amazon Valley and Orinoco in Ocean Highways: the Geographical Review, v. 9., no. 55 (1873) 184-193. [Ed. A.R. Wallace] Notes of a botanist on the Amazon and Andes. Macmillan and Co., Ltd. London. 2 vol. Reprinted ed. Johnson Reprint Corp., New York. 2 vol. (1970).

VILLAVICENCIO, M. 1858. Geografiá de la República del Ecuador. R. Craigshead, New York 371. Reprinted edition: Corporacion Editora Nacional, Quito (1984).

The Cactus Primer. A.C. Gibson and P.S. Nobel. Pp. vi + 286; illustr.; Harvard University Press, Cambridge, Mass. 1986. $39.95.

As the authors state in their preface: "People around the world and from all walks of life are hopelessly susceptible to a condition called cactophily, the love of cacti." This interest has led to a plethora of books on the cactus family— mostly dedicated to classification or horticulturally curious specimens and their care as house plants. Here we have a different book—one that, to my knowledge, is the first to present in a single volume such a wealth of data on the biology and structure of this most misunderstood family of xerophytes.

The topics discussed span a broad spectrum: general features; early evolutionary trends; special features; chemistry; how structure and chemistry can help unravel phylogeny; and, finally, relationships of the family. The extensive glossary is a very helpful addition; the detailed index unlocks with ease much of the information in the volume. Each chapter has its own bibliography.

As a contribution of true biological value, this volume will be welcomed by botanists, horticulturists and amateur cactophiles alike, and especially by those interested in the drier parts of the world, for it is not possible to find such a mass of scattered information in one book—and amassed and expertly evaluated by two recognized specialists in the group.

Richard Evans Schultes
Professor Emeritus
Botanical Museum of Harvard University
Oxford Street
Cambridge, MA 02138

Huastec Mayan Ethnobotany. Alcorn, Janis B. Austin: University of Texas Press. 1984. Cloth; 982 pp., $45.00.

This is a potentially rather valuable book, containing an impressive amount of information and presenting interesting new perspectives on several topics, but published in an unfortunately unpolished form. Printed directly from a typewritten manuscript, it gives the appearance of an encyclopedic dissertation rather than a book for wider distribution. For example, the latter half of the book, consisting of a list of several hundred plant species together with their native names, uses, etc., appears to have been printed directly from the author's database program. As such, it is rather extensively codified and hard to follow. There is, of course, a table at the beginning of the section explaining the codes, but 300 pages of such cryptic material is a trifle overwhelming. Even the textual material in the first half of the book is at points somewhat difficult to follow, since the author presents an enormous amount of material without summarizing it adequately. The main points become lost in a sea of seemingly uncoordinated data. The fascinating section on Huastec mythology is vividly written, but the author switches back and forth between etic and emic perspectives so readily that it is a constant struggle to tell the two apart.

However, if you can sift through the mountains of material, there is much of interest from both an empirical and a theoretical perspective. The primary emphasis of the book is on the relationship of the Huastec to their environment, both as seen by the natives themselves and as viewed by the author. She discusses how the native perceptions of their environment affect their techniques of resource management, and how these techniques in turn affect the flora with which the people interact. She discusses native cosmology, first in general and then in relation to the plant world, then gives a detailed description of the people's methods of agriculture and harvest of non-domesticated plants. The author stresses that many of the so-called "wild" plant species (36% of the 965 taxa collected) are in fact "managed" by the human population to some degree, rather than being left totally to natural ecological processes. Finally, she analyzes the effects that the human management processes and the history of contact with outside human populations have had on the plants, both on the genetic makeup of individual plant species and on the overall vegetation of the region.

The introductory chapter on methodology contains a valuable discussion of the problems faced by etnhobotanical researchers, along with the solutions developed by the author for coping with reluctant subjects. Some of these ideas may be of interest even to experienced field researchers as well as to newcomers.

Alcorn in this book has exhibited mastery of both the botanical and the anthropological sides of ethnobotany. I look forward to her future publications, including (I hope) shorter articles summarizing and synthesizing the findings discussed here.

Joseph E. Laferrière
Department of Ecology and Evolutionary Biology
University of Arizona
Tucson, Arizona 85721

LITERATURE CITED (continued)

season of death of archaeological fauna by analysis of teeth. Arctic 29:53-55.

_____. 1978. Zooarchaeological evidence bearing on the Nain area middle Dorset subsistence-settlement cycle. Arctic Anthropol. 15:48-60.

_____. 1979. Reindeer and Caribou Hunters. Academic Press, New York.

SPINAGE, C. A. 1967. Ageing the Uganda Defassa Waterbuck *Kobus deffassa Ugandae* Neumann. East African Wildlife Journal 5:1-17.

_____. 1976. Age determination of the female Grant's gazelle. East African Wildlife Journal 14:121-134.

STOTT, G. G., R. F. SIS, and B. M. LEVY. 1982. Cemental annulation as an age criterion in forensic dentistry. J. Dental Res. 61(6):814-817.

TCHERNOV, E. 1984. Commensal animals and human sedentism in the Middle East. Pp. 91-116 *in* Animals and archaeology 3: early herders and their flocks (J. Clutton-Brock and C. Grigson, eds.). British Arch. Reports International Series 202.

WAGNER, GAIL E. 1983. Late Harappan crops in Gujarat. Paper presented at the 12th Annual Meeting of the Mid-Atlantic Region of the Assoc. for Asian Studies, Philadelphia.

WHEELER, R. E. M. 1968. Early India and Pakistan to Ashoka. Revised ed. Praeger, New York.

WILLIAMSON, GRAHAM, and W. J. A. PAYNE. 1968. An Introduction to Animal Husbandry in the Tropics. 2nd ed. Longmans, London.

CRC Handbook of Medicinal Herbs. Duke, James A. Boca Raton FL: CRC Press. 1985. Cloth: 677 pp., $198.00.

Herbal medicine has generated a fair amount of controversy over the years. Its advocates recommend it as a more traditional, natural method of curing, safer and more wholesome than modern Western medicine. Its detractors, on the other hand, denounce herbal medicine and folk healing in general as dangerous, misguided, and unscientific, and maintain that it should not be seriously considered by any educated person. As with many controversies, the truth lies somewhere in between the two extreme viewpoints. Some herbal remedies used by folk healers do indeed perform the tasks attributed to them, in some cases more efficiently and more gently than refined modern drugs; in fact, herbs are the ultimate source of many of the refined drugs preferred by Western practitioners (e.g. *Ephedra* and *Digitalis).* Other herbal medicines yield no positive benefit whatsoever. Some are dangerous poisons, especially in large doses, while others completely lack any discernable physiological effect, though they may possibly have some salutary psychological effects as placebos or as parts of more encompassing healing rituals.

This book represents an invaluable source of information which may help researchers and health practitioners alike to ascertain the true physiological effects of a wide variety of plant species. The book concentrates on plants of dubious value, rather than on those obviously beneficial or dangerous; in fact, the author's original title for the book was "Borderline Herbs". The author predicts in the introduction that he will be criticized for not including plants which are not "borderline", and rightly so. What is perfectly obvious to one person is very often completely unknown to another. Making the book more inclusive would have added to its value as a reference volume.

Some 365 species of vascular plants are discussed, most of them accompanied by line drawings. They are listed alphabetically by scientific binomial, with common names and families listed in the index. For each species, the author discusses the traditional folk uses for the plant, active ingredients which have been identified in the plant, what effects these chemicals have on the body, and what potential problems may arise from excessive doses. There are no written descriptions of the plants, either technical or otherwise, nor any kind of a key to aid identification. This is a decided drawback since it will frequently force users to consult other reference manuals or to trust someone else's identification.

At the end of the book are five tables which supply additional information and make it easier to locate data discussed elsewhere in the book. The first table lists 1983 prices for each herb (in dollars per kilogram, from each of three different North American herbal supply catalogs), and the author's subjective evaluation of the drug's safety. He categorizes each herb on a scale of 0-3, with 0 being very dangerous, 1 more dangerous than coffee, 2 about on a par with coffee in its level of potential danger, and 3 being less dangerous than coffee. To these opinions of his own, he adds similar evaluations of two other writers on the subject, Varro Tyler, whom Duke views as a conservative author, and Jeanne Rose, whom he considers liberal. The very fact that the three writers disagree on their evaluations quite frequently serves to illustrate the difficulty and uncertainty inherent in such crude measurements of safety. All the evaluations are based on ingestion of the same dosage (one cup of tea made from the herb); this may also be somewhat misleading since different drugs yield their best effects at different strengths. Even the most beneficial compounds are dangerous when taken at improper doses. Toxicity is, of course, only half the story; the author does not devote as much space to discussing efficacy of the herbs as he does to their potential ill effects.

The second table contains an extensive list of phytotoxins along with their physiological effects and their distribution in the genera of vascular plants. The third contains much the same information about plants and their toxic components, but alphabetized according to genus instead of by compound. The fourth lists pharmacologically active phytochemicals and their general uses. The fifth and final table is entitled "Proximate analysis of conventional plant foods", but includes some information on vitamin and mineral content as well. This may be valuable in assessing the potential beneficial effects of herbs, since the main value in some treatments may indeed lie in curing nutritional deficiencies rather than in providing some more exotic drug in the conventional sense of that term.

Despite these minor flaws in organization, the book nevertheless represents a significant contribution, one which will settle many questions of the safety and efficacy of herbal medicines. It is much too technical for the average lay person, but it may help health professionals evaluate traditional practices. Students of medicinal ethnobotany may also find the book useful for gauging how much of the benefit from traditional treatment is due to active phytochemicals and how much is due to social and psychological factors.

The book also contains a valuable list of some 353 references which will help anyone wishing to get a start on the enormous amount of literature on the subject.

Joseph E. Laferrière
Department of Ecology and Evolutionary Biology
University of Arizona
Tucson, Arizona 85721 USA

LITERATURE CITED (continued)

SANTAMARÍA, F. J. 1978. Diccionario de Mejicanismos. Editorial Porrua, S.A., Mexico.

SCHULMAN, S. and A. M. SMITH. 1962. Health and disease in Northern New Mexico: A Research Report. Inst. of Behavioral Science, Univ. Colorado, Boulder.

SIMÉON, R. 1984. Diccionario de la Lengua Nahuatl o Mexicana. Siglo Veintiuno, Mexico.

People of the Desert and Sea: Ethnobotany of the Seri Indians. Richard Stephen Felger and Mary Beck Moser. Tuscon, Arizona: University of Arizona Press, 1985. $65

It is a wonderful thing that not just ethnobotany is in this work; too narrow a focus would have spoiled the richly detailed picture Felger and Moser have had the privilege to record. As it is, *People of the Desert and Sea* is a pleasure to read and a treasure for the library.

As the reader pours over the long section which takes up each of the 400-plus plants recognized by the Seri, the value of having a linguist and an ethnobotanist working together is appreciated in a personal way. The plant names are given in the binomial standard of the dominant culture, in Seri, in translation from Seri to English, both gloss and free translation. As you read them all, a sense comes of how the Seri evaluate the things of their world, and this is not an interpretation by ethnographers, but as close as one can come through words to directly seeing the thought of other human beings.

The volume's contents cover virtually everything most ethnographies have to offer: material culture, religion, food and water gathering techniques, recreation, music, world view, relation to other groups. In spite of the fact that this is more than expected for an ethnobotanical treatise, the reader will become so interested that he will want more. For instance, the methodology of research is hinted at in many places, but one comes to want a full explanation of how informants were acquired, who they were over time, whether there were disagreements over data and how these were resolved.

Appendix B, *Seri People Named in the Text* is confusing and tantalizing, has loose ends and hints at more good stories and incidents yet untold. It sparks another desire: do give us a genealogical chart for at least the Astorga family line. And if it is known, describe how prominent family lines or individuals figure in this chiefless culture, before cash economy and now.

When researchers have spent twenty and thirty years patiently teasing out information about a people struggling with the pressures of corrosive change, one might expect the tale when told to be grim or boring, or both. These authors give us a non-judgemental account that is meticulously precise, lays out uncertainties and contradictions with no excuses, and is neither dry nor maudlin. The style seems to reflect the subject, people described to be ". . . gregarious, outgoing and aggressive . . . sharp sense of humor . . . highly independent, nonconforming, and quick to adjust for the sake of convenience."

There are some 400 drawings, maps, and superb black and white photographs which probably justify the cost of the volume in themselves. The photos span many years of Seri contact with cameras; whoever did the printing is very competent. Many of the plants were photographed by Felger, who has an intense sense of composition and an eye for capturing the important detail. Almost, the reader forgets there are no color shots.

The plant descriptions themselves include drawings or photos of those species particularly important to the Seris, and of the processing systems that rendered them available for use. For instance, the various shapes of cactus fruit pickers, the way they are made and employed are shown in detail. A good sense of the labor and practiced skill required to gather wild resources is obtained from photographs of the process involved and the total take in possession of the successful gatherer, plus records of the person-hours required per quantity obtained. One example among many is the account for roots of *Cnidoscolus palmeri*. Anyone who has tried to estimate work-weeks or energy budgets or who has tried to recreate process in resource exploitation from fragmentary ethnographic accounts will be more than pleased with the coverage here.

The authors have tried to encompass everything the Seri recognized as a distinct plant, a folk taxonomic group of whatever sort. Some species important in other regions were not used here, often because they lacked quantity or reliability in Seri territories. Some species are only discerned, not used, which gives one a feel for the spaciousness of the Seri lifeway—hard but not brutish; there was time and attention given to close observation of all things, not just the utilitarian ones.

Physically, the volume is sturdily bound and the paper seems to be designed for use and reuse. The print and format are easily read, and there is adequate space for marginal notation. Happily, there are few typographical errors and the main index works; these are not things one may take for granted anymore in published material.

Cross-referencing can be uneven. Occasionally one gets part of an interesting story and no clue where to look for the rest of it. A case in point is reference to supernatural things concerning "the story of Lola Casanova and Coyote Iguana". Forty-two pages later, if you know where to look, you can find out what this is all about. Similarly, there is the displacement of details on how certain games are actually played from the section on Games to the section on Plant Species Descriptions. Even though the reader is referred to certain species, e.g. *Phragmites*, one does not expect to find more detail on game rules in the plant section than is present in the games section.

There are two assertions about the Seri which do not seem solidly supported by the text. They are subjects of considerable interest. First, the authors seem to want to say that the Seri are still intact as a cultural entity. "Although much traditional knowledge vanished with the death of each older person, Seri cultural identity remained strong in 1983. Their language was intact and their population increasing. The Seri were meeting the challenges of the modern world in much the same way as they reacted to earlier Spanish-Mexican influences—by taking advantage of new resources, new markets, and new opportunities without radically altering their loose and flexible way of life. They were accepting what they could of the new culture and rejecting that part they did not want."

Yet much of what is described in this book is gone or rapidly going, e.g. turtle hunting and usage, balsa boat building and usage, the everyday items of material culture such as utensils, houses, clothing. Food comes from stores in the face of land and sea resources depleted. To get the cash for the new things, the fashioning of wood carvings and basketry, of items largely designed for outside sale, has become important instead of food gathering and preparation. Water is obtained from wells and faucets, a fact which changes the pattern of land usage and the dispersal of social units. Their religion has been replaced by Christianity, and that alters social structure too. Genetically, they are changing with marriages into the blood lines of other peoples. It is hard to understand, at least if one has not been with them recently, how they have *not* been altered. If one took pictures of Seri in the mid-1980's, concentrating on how most people now live, what would one see? Or is what one sees less important than the living language, even with the Spanish additions? Reading these pages provokes serious thought about cultural identity and the ways it may be recognized, or maintained.

Is there such a thing as a legally recognized Seri Indian territory or reservations? Is the traditional land reserved in any way for them as a cultural, racial entity?

The second assertion is about psychotropic plant usage. The authors say the Seri do not use psychoactive materials. Nevertheless, the text relates that the Seri have their tobaccos and their cactus fruit wines. If they make use of any experiences derived therefrom, the connection is not clear in this work. Then the smoking of *Ruellia californica* leaves or flowers in a clay pipe is mentioned. This plant is known, like *Datura*, to "make people crazy." Obviously, some people used it anyway, maybe just for fun, but since there are references to Seri receiving powerful information in dreams, and there is the tradition of going on vision quest for power, the setting in which psychotropic plants could have been utilized did exist. If they make little of this usage to outsiders it may be because it is a matter of small moment, now at least, or it may be that ways of acquiring power are considered quite valuable and not mouthed about. Here again, it would help to know what the investigator-informant relationships were.

Quibbles and questions will arise, unique to the reader and his or her interests, because this account of the Seri is full and graphic and lively.

Annita Harlan
Ecology and Evolutionary Biology
University of Arizona, Tucson