

A World Directory of Ethnobotanists. S. K. Jain, P. Minnis and N. C. Shaw. Society of Ethnobotanists, Lucknow, India. 1986. Indian Rs. 15; U.S. \$2.00; L 1.50.

The Indian Society of Ethnobotanists, established in 1980, has just published a most useful directory, one that will greatly strengthen the links that bind the many specialists in interdisciplinary fields tangential to economic botany and the sundry aspects of ethnobotany.

This valuable contribution, listing the names, addresses and usually the specific research interests of 489 ethnobotanists, can be purchased by writing to Dr. Ved Prakash Tripathi, B-20 CRIR Colony, Nirala Nagar, Lucknow, India.

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Prehistoric Food Production in North America. Richard Ford, editor. Museum of Anthropology, University of Michigan Anthropology Papers, No. 75. Ann Arbor: University of Michigan Press, 1985.

This volume of eleven papers assesses plant domestication, diffusion, horticulture, and the effects of these processes on the prehistoric human cultures north of Mexico. Originally derived from presentations made at an advanced seminar at the School of American Research in March, 1980, these manuscripts reflect a fertile interaction between selected archaeologists, archaeobotanists and crop evolutionists. Both its successes and failures are consequences of its transition into book form during a watershed in American ethnobotany.

First, the outline of the structure of the book and its unifying themes. In an excellent preface by Richard Ford, written four years after the seminar on "The Origins of Plant Husbandry in North America," the following issues are outlined as the themes which participants were asked to address. The authors who contributed most to discussion of a particular issue are noted in parentheses.

1. Demography and subsistence patterns at the time of crop introduction from Mexico (Patty Jo Watson on Mississippi watershed cultural changes; Paul Minnis on archaic economies in the Southwest).

2. Modes and routes of crop diffusion (Dee Ann Story on the proposed east Texas route via the Gulf Coastal Plain; Walton Galinat on eight-rowed maize diffusion; Frances King on cucurbits).

3. Genetic characteristics of early crop introductions (Charles Heiser and Frances King on cucurbits; Galinat on maize; Asch, Asch and Heiser reviewing chenopods, bottlegourds and tobacco, and Ford's summary).

4-5. Integration into existing economies, and resulting changes (Minnis on the Southwest, Watson on the Mississippi Valley, and Ford on regional crop complexes).

6-7. Technological intensification of food production and constraints to intensification and expansion (Ford and Minnis on processing technologies; Watson on material correlates of agriculture, and Cowan and Minnis on environmental management through burning, irrigation and transplants).

8. Effects on sedentarism (Watson and Minnis on respective regions).

9-10. Plant domestication, breeding or varietal evolution north of Mexico, and its recognition in the archaeological record (Heiser on sunflowers, sumpweed, and minor cultigens; Cowan on the same, as well as on trees; Asch and Asch on knotweed, maygrass and little barley; and Galinat, Minnis and Berry on changes in maize; Berry and Minnis on early dates of domesticates).

These annotations suggest that there was quite a bit of overlap in coverage of certain items, such as squash, sunflower, maize and chenopod prehistory, and difficulties with dating early maize and cucurbits. While this redundancy may make some readers skip over reiterated details from one paper to the next, the authors must nevertheless be commended for tackling common problems from different perspectives. In this manner, we learn that acceptance of sumpweed, giant ragweed, devil's claw, jerusalem artichokes, knotweed, groundnuts and panicgrass as true domesticates was open to debate at the time of the seminar. Early introduction dates for *Cucurbita pepo*, *Lagenaria siceraria* and more conservative dates for *Zea mays* were being accepted. The Eastern cultivated chenopod was being more confidently identified as *Chenopodium berlandieri* var. *nuttalliae*, and *Cucurbita pepo* var. *texana* as a wild progenitor or as a feral (regressive) form was being seriously reconsidered.

Most importantly, this book, and in particular, Richard Ford's synthetic essays, allow us to better compare and contrast the development of horticulture in the central

Mississippi watershed and the U.S. Southwest. Although the book does not truly cover North America—it excludes the Upper Missouri, Florida, the eastern seaboard, the Great Basin, the western Plains, and northern Mexico—it is a valid advance toward a continental synthesis on horticultural evolution. Since North America (north of Mesoamerica) is still regarded by Europeans, the USDA and many Latin American ethnobotanists as altogether lacking an agricultural history which includes indigenous domestication and diversification, this volume proves that North Americans need not travel to other continents in order to study crop evolution.

Yet Richard Ford's Preface admits the volume's unfortunate flaw—the years following the conference witnessed “the most productive period in the history of American ethnobotany”. Ford notes that “Numerous cultural resource management projects have yielded an unprecedented quantity of plant remains from archaeological sites throughout the United States”. The efforts to integrate these results into various chapters in the four years of manuscript revision prior to publication were uneven, and generally inadequate, since subsequent advances radically changed the picture presented at the 1980 conference. By the time the volume was distributed, new dissertations, journal articles and books had clarified the status of chenopods (Wilson), barley (Adams, Bohrer and Gasser), agaves (Miksicek, Fish and Bohrer), pepos (Wilson and Conard), devil's claw (Bretting, Nabhan, Whiting, Dobyns and Euler), panicgrass (deWet, Kaemlein and Nabhan), mustards (Bye), amaranths (Miksicek), and saltgrass (Felger and Jensen) and numerous “wild” plants in the East (Munsun, 1973). Maize diffusion and classification had been rewritten by Doebley and Goodman, and Merrick had reported on new insights into *Cucurbita mixta* and *C. moschata* at national meetings. Miksicek, Winter, Bohrer, Gasser and others have found earlier dates of crop introductions (tobacco, amaranth, etc.) into the Great Basin and Southwest. More disconcerting, turkey prehistory has lately been rewritten by Rea, McKusick and Steadman, but animal domesticates are hardly noted in the volume at all. Zooarchaeology by Szuter, Bayham, White, Emslie, and Fritz fails to merit any mention in the transition from gathering and hunting to agriculture *plus* hunting and gathering. New hypotheses on the origins of agriculture by Rindos (1984) and Johns supercede many of the ones presented here, although they remain controversial.

There is no fault in the editor or authors for having some of their interpretations become obsolete due to new advances. That portions of this well-written book are already outmoded signifies great growth in interdisciplinary efforts, to which these scientists have all contributed. This obsolescence was not planned, nor was the seeming exclusion of other work. In short, *Prehistoric Food Production* offers a snapshot of a landscape that has already changed since this book's conception. All North American ethnobiologists are indebted to those included in this volume who have laid such a groundwork for advancing a synthetic understanding of American agricultural origins.

Selected References:

- Munsun, Patrick J., ed. 1984. Experiments and Observations on Aboriginal Wild Plant Food Utilization in Eastern North America. Indiana Historical Society, Prehistoric Research series, Indianapolis.
- Rindos, David. 1984. The Origins of Agriculture: An Evolutionary Perspective. Academic Press, Orlando.

For other notes on recent developments in North American plant domestication, readers are referred to articles which have appeared in *Journal of Ethnobiology*, *Economic Botany*, *American Journal of Botany*, *American Antiquity* and *Desert Plants*.

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Of Plants and People. C. B. Heiser, Jr. University of Oklahoma Press, Norman, Oklahoma. 1985. Pp. xiii, 237; 65 figs.

Professor Heiser, who has published several books on economic plants of the Andean region, has a facility in sharing his enthusiasm and interdisciplinary outlook for the study of many of the poorly known economic plants of the Andes with his readers. An accomplished and experienced field botanist, his writings encompass botany, anthropology and sociology and bring out the often major roles that these usually minor crop plants play in the life of native peoples in South America.

This new contribution is, in the words of the author, "unlike my other works . . . not confined to one subject or to a single group of plants . . . and all of the plants have interesting interactions with people." In addition to its value to botanists and anthropologists, he has successfully striven to "write for the student and amateur in mind."

The book is divided into 13 chapters: Pepos and people; Totor and Thor; Little Orange of Quito; Chenopods; Sangorache (*Amaranthus*); Trip to Tulcan; Lupines; Green "Tomates" (*Physalis*) and purple "Cucumbers" (*Solanum*); Peppers, Peperomias; Sumpweed (*Iva*); a Plague of locusts, Seeds, sex and sacrifice—religion and the origin of agriculture. The extensive bibliography is divided into sections, each chapter with its own list of items and often analytic notes.

It is to be hoped that the appearance of this type of book may encourage the publication of others in the field of ethnobiology. Ethnobotanists will want to have **Of Plants and People** at hand on their shelves.

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