

The Origins of Agriculture: An International Perspective. C. Wesley Cowan and Patty Jo Watson. Washington and London: Smithsonian Institution Press, 1992. \$49.95/£38.95/E\$59.95 (clothbound); \$19.95/£15.50/E\$23.95 (paperbound). Pp. xvi, 224. ISBN 0-87474-990-5 (cloth); 0-87474-991-3 (paper).

This volume has eight regional sections, each by a noted scholar, plus introduction and concluding remarks by the editors. A thorough index, 32 figures, and 34 tables are included. Each chapter has its own list of references cited. The book seems directed to archaeologists and paleoethnobotanists, though it is all well-written and accessible to anyone with a serious interest in the origins of agriculture.

The editors' introduction gives some historical perspective on the search for the origins of agriculture and on paleoethnobotany. The editors are careful to lay a little groundwork for the nonspecialist by making clear some dimensions in the

study of early agriculture that specialists do not often reiterate. For example, a domesticate was not a sudden discovery made in prehistoric times, but the result of centuries or millennia of development.

The book offers detailed archaeological information but seldom lapses into minutia. Data are abundant and clearly presented in tables, charts, and maps. Most chapters consist largely of sections on natural environment, history of research, culture history, and plant species. In this way, the book is valuable for comparing and contrasting different parts of the world. Extensive references help those interested to pursue their special interests into the library.

Gary W. Crawford's chapter on East Asia emphasizes Japan but covers China and Korea, too. He describes over a dozen species of cultigens and discusses ancient evidence for their use. He also offers an explanation for the spread of plant husbandry in Japan.

Naomi F. Miller's coverage of the Near East makes an interesting case for interpreting different types of archaeobotanically mixed assemblages as fodder for domestic animals, as refuse from plant/crop processing or as evidence for the use of dung as fuel. She considers multiple types of evidence including technological, skeletal, ecological, botanical, and archaeological context.

Jack R. Harlan's chapter on Africa takes a different approach. He uses genetic, ecological, and geographic botanical evidence for the crop histories of sorghum, pearl millets, wild rice, and yams. By plotting continent-wide distributions of wild and cultivated species he shows where the several species were first domesticated and provides evidence for their diffusion.

Robin W. Dennell reviews recent models of European agricultural expansion and, with alternate explanations for the evidence, he makes a convincing argument that in some areas of Europe, agriculture was introduced and adopted quickly, but that in other areas, native species were gradually domesticated during a much longer period. The different relative speeds with which agriculture was adopted speak for the different ways that hunter-foragers and cultivators interacted with one another in different regions.

Bruce D. Smith's chapter on the woodlands of eastern North America is structured according to a six-part culture history extending from pre-5050 B.C. through post-A.D. 1150. Each of his sections is a concise yet detailed account of the plant/people relationship cast variously in terms of the interaction among climate, micro-ecology, botanical genetics, technology, and nutrition to explain the process of increasing human intervention in the life cycles of several plant species.

Paul E. Minnis argues that the demonstrably slow acquisition of agriculture from Mesoamerica by Archaic peoples in the Desert Borderlands of northern Mexico and southwestern United States did not drastically change ecological, economic, or social relationships. However, Archaic peoples appear to have been accomplished wild plant manipulators even without domestication.

Emily McClung de Tapia discusses Mesoamerica and Central America from the perspective of plant biological transformation and from the perspective of human manipulation of plant species. She favors Flannery's systems theory approach because, in part, the Mesoamerican context of domestication was different than those of the Old World.

South America is presented by Deborah M. Pearsall who emphasizes the wealth of evidence from the western coast and Andean highlands. She discusses the Lowland, Andean Mid-Elevation, and Andean High-Elevation agriculture complexes and presents the long culture history of plant domestication after 8000 B.C.

In summary, I recommend this valuable handbook to those interested in the current understanding of agricultural origins anywhere in the world. Regional specialists will benefit from having not only their own regions but many others, too, presented in comparable ways.

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