

The Lowland Maya Area: Three Millennia at the Human-Wildlife Interface. 2003. Arturo Gómez-Pompa, Michael F. Allen, Scott L. Fedick, and Juan J. Jiménez-Osornio (eds.). Food Products Press, New York. 659 p. with index. ISBN 1-56022-971-3.

This book is a collection of 36 papers presented at the 21st Symposium of Plant Biology at the University of California at Riverside organized by Arturo Gómez-Pompa. The goal was to bring together the latest information from multiple disciplines, including biology, ecology, anthropology, geology, and climatology to gain new insights into one of the world's most sophisticated ancient civilizations. Using a multidisciplinary approach, scholars are trying to understand how the Maya, who occupied an area encompassing parts of Mexico, Guatemala, and Belize between 1,000 BC and 950 AD, developed into a highly complex society that at its height supported millions of people in a lowland tropical rainforest environment. Intriguing questions persist about the sudden collapse of the Mayan civiliza-

tion in 950 AD when the population was rapidly decimated by 90% during a prolonged drought. The Maya provide a case study for examining questions of how and to what degree land use patterns, environment–people interactions, carrying capacity extended by technology, and environmental change can contribute to the downfall of civilization. Arturo Gómez-Pompa is distinguished professor of botany at the University of California at Riverside and Founder and former Director of the National Institute of Biotic Resources of Mexico. Michael Allen is professor of plant pathology and biology and chair of the Center for Conservation Biology at the University of California at Riverside. Scott Fedick is associate professor of Anthropology at the University of California at Riverside. Juan Jiménez-Osornio is professor of agroecology at the University of Yucatán. This international collaboration includes 74 contributors from 5 countries; all recognized experts in their fields. Sixteen states from the United States and 7 Mexican states are represented, along with Spain, Germany, and Switzerland.

The book is divided into seven large topic areas. Part I is the Introduction. Part II covering the biological and physical environment contains nine chapters describing the environment, geology, climate history, flora, soils, and microbiology past and present. Part III, which examines the biodiversity of the region, includes chapters on mycology, phycology, entomology, and invertebrate biology. Part IV on agriculture looks at evidence for ancient and historic agricultural technologies adapting the wetlands to agriculture, discusses carrying capacity in response to technology, and addresses the interesting idea that algae may have been purposefully produced for fertilizer. There are also chapters on chocolate and agave domestication. Part V, under the heading plants and people, includes chapters on various subjects from hurricanes, a garden experiment, and plant classification to natural resource management. Part VI on the future, which discusses restoration of the tropical forest and a school for ecological agriculture, also includes a paper about high school science classes conducting biodiversity research. The final part attempts to synthesize the vast amounts of disparate data presented in the many papers into a comprehensible summary. The authors present their case of how studying the changing Maya world provides valuable insights for how we can address global environmental challenges in the future.

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