

- México.
- LEOPOLD, A. STARKER. 1965. Fauna silvestre de México. Instituto Mexicano de Recursos Naturales Renovables, México.
- MIRANDA, FAUSTINO. 1958. Estudios de la vegetación. Volume II *in* Los Recursos Naturales del Sureste y su Aprovechamiento. Enrique Beltran (editor). Instituto Mexicano de Recursos Naturales Renovables, México, D.F., México.
- MORLEY, SYLVANUS G. 1965. La vida diaria entre los mayas del Quintana Roo prehispánico. Ediciones del Fondo de Cultura Económica, México.
- REDFIELD, ROBERT and ALFONSO VILLARROJAS. 1934. Chan Kom: A Maya village. University of Chicago Press, Chicago.
- RICO-GRAY, VICTOR, ALEXANDRA CHEMAS and SALVADOR MANDUJANO. 1991. Uses of tropical deciduous forest species by the Yucatecan Maya. *Agroforestry Systems* 14:149-161.
- _____, and JOSE G. GARCIA-FRANCO. 1991a. The Maya and the vegetation of the Yucatan Peninsula. *Journal of Ethnobiology* 11(1):135-142.
- _____, and JOSE G. GARCIA-FRANCO. 1991b. Vegetation structure and soil seed bank composition of nine regrowth years of the tropical lowland deciduous forest of central Yucatan, Mexico. Manuscript on file, Centro de Ecología, Universidad Nacional Autónoma de México.
- _____, JOSE G. GARCIA-FRANCO and ALEXANDRA CHEMAS. 1988a. Yucatecan Mayas knowledge of pollination and breeding systems. *Journal of Ethnobiology* 8:203-204.
- _____, JOSE G. GARCIA-FRANCO, ALEXANDRA CHEMAS, ARMANDO PUCH, and PAULINO SIMA. 1990. Species composition, similarity, and structure, of Mayan homegardens in Tixpeul and Tixcaltuyub, Yucatan, Mexico. *Economic Botany* 44(4):470-487.
- _____, JOSE G. GARCIA-FRANCO, ARMANDO PUCH, and PAULINO SIMA. 1988b. Composition and structure of a tropical dry forest in Yucatan, Mexico. *International Journal of Ecology and Environmental Sciences* 14(1):21-29.
- _____, ARTURO GOMEZ-POMPA and CASTULO CHAN. 1985. Las selvas manejadas por los mayas de Yohaltún, Campeche. *Biótica* 10:321-328.
- SANABRIA, OLGA LUCIA. 1986. El uso y manejo forestal en la comunidad de Xul, en el sur de Yucatán. Pp. 1-191 *in* *Etnoflora yucatanense*. Volume 2 Victoria Sosa (editor). Instituto Nacional de Investigaciones Sobre Recursos Bióticos, Xalapa, Veracruz, México.
- SOSA, VICTORIA, JOSE SALVADOR FLORES, VICTOR RICO-GRAY, RAFAEL LIRA, and J.J. ORTIZ. 1985. Lista florística y sinonimia maya. Pp. 1-225 *in* *Etnoflora yucatanense*, Volume 1. Victoria Sosa (editor). Instituto Nacional de Investigaciones Sobre Recursos Bióticos, Xalapa, Veracruz, México.
- UCAN EK, EDILBERTO, MIGUEL NARVAEZ, ARMANDO PUCH, and CASTULO CHAN. 1983. El cultivo del maíz en el ejido de Mukel, Pixoy, Yucatán. Fondo de Culturas Populares, México.
- YAH, DAVID. 1983. La cacería del venado. Editado por Secretaria de Educación Pública, Yucatán, México.

BOOK REVIEW

The Potato: Evolution, Biodiversity, and Genetic Resources. J.G. Hawkes. London: Belhaven Press, 1990. Pp. viii, 259. Photographs, maps, and a line drawing of floral parts. \$48.00. ISBN 87474-465-2.

Of all the gifts of the Andean chain to the world tobacco and the potato stand out as undoubtedly the most widely used economic plants. It is difficult to imagine life in North America and Europe without the potato. Great advances

have been made in potato production and other aspects of biology of this crop plant, but modern techniques certainly can promise even more improvements if wild strains and related wild species are preserved.

The present study by one of the outstanding experts on the potato (an up-dating of his earlier publication on the botany of the potato) is a concise but searching summary of potato history, classification, nomenclature, and biology. It appears at a very opportune time, when conservation and biodiversity have come to the fore in the public mind. The Andean flora still offers material that may be of extreme value to future breeders and scientists.

The book has seven chapters. The introduction summarizes the importance of the potato as a world crop and briefly reviews related and cultivated species, diversity of wild types, and the prehistory and introduction of the potato to Europe. Chapter 2 discusses the origin and first home of the potato, and the third chapter surveys its spread the world around. In Chapter 4 the cytology and reproductive biology are considered. Chapter 5 is devoted to evolution of the plant. In Chapter 6 systematics and biodiversity are outlined with 220 species discussed, and descriptions and keys presented. This is followed by consideration of the genetic resources of the potato in Chapter 7.

There are four appendices: 1) Names not included in this volume; 2) Classification, biology, and geographical origin of species in *Solanum*, section *Petota*; 3) Glossary; and 4) Taxonomic list of names and their usual abbreviations.

The bibliography comprises 148 items. It is followed by a comprehensive index.

Economic and systematic botanists, biochemists, geneticists, agriculturists, phytopathologists, breeders, and students of history will find this contribution a welcome summary of a most complex but challenging biological exercise of such importance to human development.

Richard Evans Schultes
Harvard Botanical Museum
Cambridge, Massachusetts

BOOK REVIEW

With Bitter Herbs They Shall Eat It: Chemical Ecology and the Origins of Human Diet and Medicine. Timothy Johns. Tucson: University of Arizona Press, 1990. Pp. xviii, 356. Plates, maps, appendices, bibliography, index. ISBN 0-8165-1023-7. \$40.00.

In this major study, Timothy Johns advances the state of ethnobiological thinking on the role of biochemistry in human-plant interactions. Discussing the omnivorous nature of our species, he shows how we have had to draw on our intellectual resources to construct cultural ways of dealing with the complex and varied chemicals in our foods. Humans have specific nutritional needs and are subject, to varying degrees, to poisoning by a wide range of chemicals naturally