

History of a Food Crop

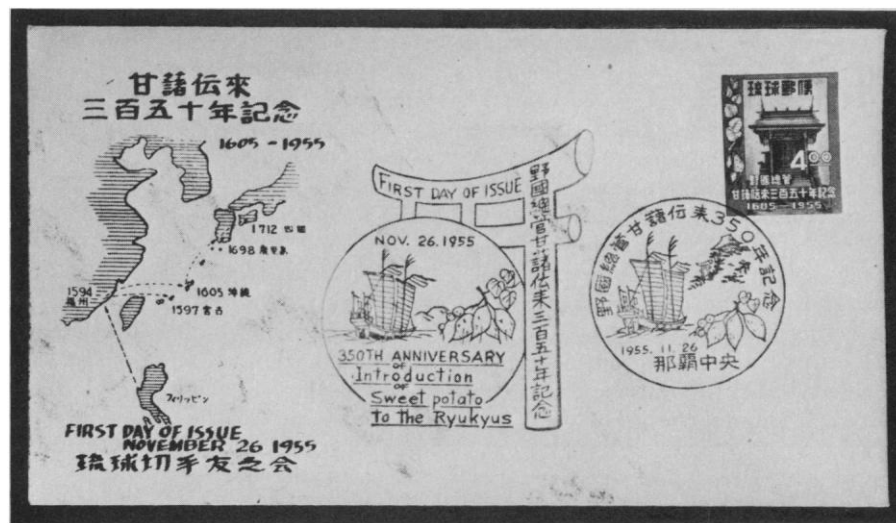
The Sweet Potato and Oceania. An Essay in Ethnobotany. D. E. YEN. Bishop Museum Press, Honolulu, 1974. xvi, 390 pp., illus. \$18. Bernice P. Bishop Museum Bulletin 236.

Like the Irish potato in Europe, the sweet potato in the Pacific has had a long and fascinating history. Both these New World root crops came to dominate the food economies of Old World regions far removed from their respective centers of origin. But there the similarity ends. Much has been written about the white potato, which thrives under cooler climatic conditions and is familiar throughout the temperate zone. The sweet potato on the other hand, at least as a major starch staple, has been neglected like many other tropical subsistence crops.

In this meticulously researched monograph, Yen helps to redress that imbalance. He explores the complex history of the sweet potato and provides a wide-ranging survey of its botanical variability and of the Oceanic cultural practices associated with it. New and comparative data for those concerned with agronomic adaptation of various tropical root crops, with the development of world food resources, or with the intriguing problems of possible pre-Columbian contact between the New World and Polynesia fill this report. It will serve as a detailed source book on these and related topics as well as a reference work on the species *Ipomoea batatas*. For research on tropical economic systems it contains a wealth of suggestions for the imaginative field investigation of agronomic problems.

With primary support from the Rockefeller Foundation beginning in 1957, Yen was able to study sweet potato variation, and agricultural systems in which that cultigen featured prominently, in more than two dozen subsistence farming communities in different parts of Southeast Asia (including the Philippines), the Ryukyus, New Guinea, Melanesia, and Polynesia (including Easter Island, and several outliers), as well as in western South America. Extensive collections were made and grown at field sites and at the author's original institutional base in New Zealand, where more than 700 clonal specimens were studied. Although Yen began this investigation as a botanist and agronomist, his close collaboration with field anthropologists and tropical farmers led him to an increasingly greater involvement with ethnobotany and the comparison of agricultural systems from both historical and geographic perspectives.

Designed to provide a "more substantial



A first-day cover for a postage stamp depicting a shrine built in Naha, Okinawa, to honor the introduction of the sweet potato to the Ryukyu Islands. [From *The Sweet Potato and Oceania*]

basis" for examining the origins, distribution, and cultural use of the sweet potato, this book has resulted in an unusually rich compendium of careful laboratory analyses and perceptive field reports, documentary and archeological evidence, comparative lexical materials, and evaluations of various hypothetical routes of transference and stages of this crop's development. Reviewing his own research and the literature through 1971, Yen confirms the early prehistoric "origin" of the sweet potato as a cultigen in the New World tropics and the tripartite hypothesis regarding its later introductions into the Pacific (by A.D. 500 to Polynesia, in the 15th and 16th centuries as far as the Moluccas via Portuguese voyages around Africa, and to the Philippines and beyond via Spanish voyages across the Pacific from Mexico). Evidence for the widespread pre-European agricultural importance of the sweet potato in Polynesia seems conclusive. Other Oceanic starch staple crops could not be grown over as wide an altitudinal and latitudinal range. Areas in which the sweet potato could be cultivated probably extended along many margins beyond those suitable for the closest Old World analog, the greater yam (*Dioscorea alata*). At high elevations in central New Guinea and in Cordilleran Luzon, for example, this introduced plant became and continues to be the dominant food crop.

For students of tropical agriculture generally, the chapters on the agronomy of the sweet potato and its role in ten contrastive cropping systems will help to fill a large gap in the literature. Despite their economic importance, until very recently the major tropical starch staple root crops—sweet potato, manioc, taro, yam—have received very little detailed attention in print. Yen's relatively full account of the mixed grain-

and-rootcrop farming pattern in Bayyu, Bontoc, deserves special attention in this regard.

The book contains useful discussions of possible modes of transmission, vegetative propagation, taxonomic relations, cytology, centers of variability, and the geographic distribution of varieties. Some readers may wish for coverage of Pacific areas that could not be or were not visited, for further discussion of the linguistic evidence, or for an expanded index. Even the most specialized user, however, cannot help but be thankful for this very welcome landmark publication.

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Physical Anthropology

The People of Africa. JEAN HIERNAUX. Scribner, New York, 1975. xiv, 218 pp. + plates. Cloth, \$12.50; paper, \$4.95. Peoples of the World Series.

This is a monograph about human biological diversity in sub-Saharan Africa. It is the third in a series of brief volumes summarizing human variation within continents, written primarily for students or for professionals in related disciplines. The author has worked for years in Africa, and he is a pioneer in anthropology in the application of computerized methodology to the study of genotypic and morphological differences among populations.

Racial variation in man has always been a topic of great popular and scholarly interest. We want to know why we differ from each other and what it means. In general biology the origin and maintenance of