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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.

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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