BOOK REVIEW

Handbook of Edible Weeds. James A. Duke. Boca Raton, FL: CRC Press Inc., 1992. Pp. v, 246. $24.95 (hardcover). ISBN 0-8493-4225-2.

It can be a difficult job to represent the 1000 plus consumable species in the United States with a sample of 100 edible plants, even if you are using a rather broad definition of "weed." Dr. Duke has met this challenge admirably even if he included a few that he himself would have rather excluded (e.g., *Stellaria media*). Some readers might be surprised to find that such trees and shrubs as *Acer, Asimina, Carpinus, Castanea* and *Diospyros* are considered weeds. Nonetheless, their weediness is attested to by their presence in the Weed Science Society of America's "Composite List of Weeds" (which unfortunately lacks a complete citation and inclusion in the bibliography) or, in a few cases, the author's field experience.

The "introductory harangue" (Duke 1992:6) enlightens the readers on several matters. The most important are the perspectives "Jim" employed to put together this volume. One should consider that about 10% of the world's flowering plants are weeds. More than half of the 18 worst world weeds are included in the book. This point is of interest to ethnobiologists given that the general definition used is that a weed is "a plant growing where it is not wanted"—a pandora's box for plant-human relationships. Rather than getting rid of weeds, one could exploit this renewable resource to increase available human food, to produce renewable biomass fuel, to provide primary material for extraction of chemical substances of medicinal and industrial importance, and to slow down global warming by fixing more carbon dioxide. The rapid evolution of herbicide resistance coupled with Nature's abhorrence of an ecological vacuum suggest that the complete elimination of weeds is not possible. So, "If you can't beat them, eat them!" (Duke 1992:3).

The main text consists of 100 genera of flowering plants with selected species discussed under each genus and with one species per genus illustrated. The presentation is alphabetical by the generic name. The format incorporates the scientific binomial followed by the family and common names. The brief text includes the plant description, its distribution in the United States and notes on its utility. The descriptive section is brief with the diagnostic characteristics of the habit, leaves, flowers and fruits listed. The distributional data mention the habitats, the flowering and fruiting periods as well as the general biogeography by listing the limiting northwestern, northeastern, southwestern and southeastern states and the United States Department of Agriculture's Plant Hardiness Zones.

The most chewy part of the book is found in the utility section. Most of the data are derived from US references as well as the author's personal foraging experience in the field or during his jogging lunch hour. Fragments of human experiences with the described species or related taxa in other parts of the world are presented. Many of the 100 utility sections devote more lines to non-edible uses, especially medicinal, in addition to the details of the palatable vegetable and fruits.

Appropriate caution is given to such possible dangers as deadly misidentifications, nitrate toxicity, oxalic acid composition and the ingestion of *Giardia*

and amoebas when eating untreated aquatic plants. The compact two-page arrangement with the illustration facing the text allows convenient reference to each entry. Apparently due to the limited space and in the interest of smoother reading, the bibliographic citations are very uneven and in some cases absent or incomplete. This situation makes it pleasant to read without getting bogged down but is frustrating when trying to use it as a guide to the literature on the diverse aspects of edible plants that are delightfully presented.

The text is full of interesting comments of a personal and general nature. Under *Castanea* we learn about Mr. Brooks who instilled the interest in foraging in the author. We also know he does not like spinach and uses it to rate his preferences for other plants (such as comparing *Portulaca,* one of the most important greens eaten in Mexico, to "slimy spinach"). His observations have lead him to propose certain hypotheses for future investigation such as "blacks and southerners . . . prefer potherbs of the cabbage family, while northerners tend to prefer potherbs of the spinach family" perhaps explaining Dr. Duke's dislike of spinach. Another is that squirrels know which nuts of *Carya* are sweeter by the split pattern of the husks. The exploitation of animal caches of fruits and roots is an interesting component of human foraging behavior for various edible species. The author's episode with the strong tasting *Yucca* buds might have been more pleasant if he had removed the stamens and pistils as is done with the popularly consumed flower buds of *Agave* and *Yucca* in Mexico. As an example of the relevance of eating weeds to an environmentalism philosophy developed in the introduction, we learn that adding endoperoxide-containing herbs such as *Artemisia annua* and *Chenopodium ambrosioides* to beans not only reduces certain personal annoyance but also could promote greater consumption of vegetarian protein in place of animal protein thus altering the global warming trend to which ruminant animals contribute through their release of methane and carbon dioxide.

The bibliography of edible plants is limited to some of the more standard references, of which only a part are cited directly in the text (and so marked with an asterisk). Some entries are incomplete (e.g., Baird and Lane 1947) while others are absent (e.g., BCW on page 82, Gail on page 193, SN [Science News ?] on page 44, and WSSA [Weed Science Society of America]). The remainder of the book presents a useful listing of the illustrations, and an index to scientific and common plant names as well as a general index.

This delightful book is a fine prologue to common edible plants that surround North Americans but whose gustatory benefits may go unrecognized and under exploited. The concise text is an introduction to history, biology and values of little appreciated plants for those wishing to know more based upon practical and scientific literature as well as personal experience.

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