

**Living Liqueurs.** James A. Duke. Lincoln, MA: Quarterman Publications 1987. Pp. xvi, 110. \$15.00.

Dr. James Duke's record of publications is full of surprises, but nothing more novel has appeared from his pen than this charming and really useful book. As the author points out in his introduction: "Hundreds of aromatic herbs have been used in liqueurs, and many of these can be grown as perennials in your kitchen window, or backyard . . ."

The book is a do-it-yourself manual on how to utilize many of our well-know and a good number of poorly-known herbs. A total of 50 species are discussed from the point of view of culture, uses, and folklore. Each plant is artistically depicted in line drawings by the author's wife, Peggy K. Duke. A list of 37 references is appended, as is an extensive index to folk medicinal uses, with asterisks indicating implications of scientific rationales for the uses. There are also three tables: 1) Liqueur ingredients generally regarded as safe; 2) Yields and drying temperatures; and 3) Ecosystematic data.

This little volume will have wide appeal because of its topic, thoroughness of coverage, and authoritative treatment.

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**L'ethnoscience: Autres regards, autres mots.** Daniel Clément, ed. Recherches amérindiennes au québec (6200 de St-Vallier, Montréal H2S 2P5, Canada), Vol. XVII, No. 4, 1987-88. Pp. 100. Can. \$7.50.

This journal usually has a regional focus, but this special collection of 6 papers goes farther afield to demonstrate that "ethnoscience" is alive and well. Three papers, by Cecil Brown, Gerry E. McNulty, and Mary Black-Rogers, address issues and present research results pertaining to ethnographic semantics; the other three deal specifically with ethnobiological topics.

"Taller de Tradicion Oral" and Pierre Beaucage argue that the cognitive processes involved in folk classification must be viewed in the context of praxis for a full understanding of Nahua (Mexico) ethnobotany. Daniel Clément advances our understanding of the place of the wolf (*Canis lupus*) in Montagnais (Eastern Canada) life and thought by comparing native and scientific perceptions. A critical overview of the work of Cecil Brown and his collaborators in ethnobiology is offered by Gilles Brunel, usefully relating this corpus to the paradigms established by Brent Berlin.

All of the papers (in French, with English abstracts) warrant close reading.

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**A Manual of Ethnobotany.** S.K. Jain, ed. Jodhpur, India: Scientific Publishers, 1987. Pp. x, 228. Rs. 125.

During the past quarter-century, India has been in the forefront of ethnobotany.

There is hardly another nation that has so many trained young ethnobotanists. One of the outstanding leaders in this upsurge of interest in ethnobotany is Dr. S.K. Jain. He has many achievements to his credit, principal amongst which is his major influence in founding the very active Indian Society of Ethnobotany. The editing of this significant *A Manual of Ethnobotany* is certainly not one of his least contributions to the high place that this inter-disciplinary discipline has attained in his country.

The book fully covers the concepts, scope, practical and academic value, and field methodology of ethnobotany and instruction in this aspect of science. Fifteen Indian specialists have contributed to the work, which is divided into 16 sections, all of which are based on lectures given at a meeting of the Indian Society of Ethnobotany held at Lucknow in 1986. The spectrum of topics considered is very wide-ranging, from the scope and subdisciplines of ethnobotany to plants in magico-religious beliefs in the Sanskrit literature and guidelines to the preparation of scientific and technical papers, reports, and popular articles.

India must be congratulated; Dr. Jain must be thanked; and the contributors must receive our gratitude for the effort involved in producing this worthwhile and useful manual.

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**Santa Ysabel Ethnobotany.** Hedges, Ken and Christina Beresford. Illustr. by Rose Christensen. San Diego Museum of Man, Ethnic Technology Notes No. 20. 1986. Pp. 58. n.p. (paper).

*Santa Ysabel Ethnobotany* is based primarily on the testimony of Christina Beresford, one of the last Diegueño (Yuman) Indian basketmakers. The information was recorded by Ken Hedges as a student project in 1966 and has been circulated informally since then. This published version is well illustrated with Rose Christensen's line drawings.

A total of 77 botanical species, including 8 of Eurasian origin, are arranged alphabetically by Latin name and individually described; an additional 13 unidentified taxa are discussed in conclusion. Diegueño names (mostly supplied by Mrs. Beresford) are recorded for 33 taxa, including 5 named types of oaks (*Quercus*); these 5 oak taxa are not labeled binomially. (By contrast, several species of cacti are lumped under a single Diegueño term.) A special section on the key Diegueño staple—acorns—describes terminology, methods of preparation of acorn mush, and associated material culture current in 1966. Basketry plants are also detailed separately. A table comparing Diegueño plant uses with those reported in the literature for the neighboring Kumeayaay (Yuman: Hokan), Luiseño, Cupeño, and Mountain Cahuilla (all Takic: Yuto-Nahuan) is appended.

We may be grateful to the authors for their efforts in preserving this tantalizing remnant of Diegueño ethnobotanical ethnography.

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**Social Adaptation to Food Stress: A Prehistoric Southwestern Example.** Minnis, Paul E. Chicago: University of Chicago Press. 1985. \$8.50 (paper).

The usefulness of ecological models in archaeology is amply demonstrated in Minnis's disquisition on the response of social groups of food stress. Minnis's model, outlined in Chapter Two, states that more or less sedentary social groups will resort to increasingly drastic and more inclusive social and economic responses when faced with progressively severe problems of food provisioning. Three ethnographic examples (two from Southeast Asia and one from Africa) indicate the general utility of the model.

The study is carried out using a 1150-year prehistoric sequence (outlined in Chapter Three) of the Rio Mimbres region of southwestern New Mexico. Population estimates based upon room area indicate a fairly uniform rate of population increase during the Early Pithouse and Late Pithouse Periods (the first 800 years), a high rate of increase during the succeeding Classic Mimbres Period (150 years), and an abrupt decline in the subsequent Animas and Salado Periods (200 years).

Examination of biotic and abiotic environs of the Rio Mimbres region in Chapter Four provides a feeling for the agricultural marginality of the study area. The basis for reconstructing the environmental stress experienced by the prehistoric human population is a tree ring-dated precipitation history, which indicates periodic drought conditions, based upon indices derived from a region 100 km to the north. Archaeological evidence, in the form of wood charcoal, documents anthropogenic environmental degradation prior to and during the Classic Mimbres Period, when increasingly intense use of the floodplain for agriculture largely denuded the local gallery forests.

Having documented change in population and agricultural intensification in the more productive floodplain, attention is directed at estimating the degree and periodicity of food stress in the study area (Chapter Five). As a first step toward estimating the stress experienced by the prehistoric Mimbres population, Minnis provides a useful though limited discussion of the problems inherent in estimating subsistence economy from "raw" archaeological data. Using the generally preferred ubiquity method (percent of total samples containing a particular specimen type) for estimating the importance of archaeobotanical materials, maize, not surprisingly, is argued to be the most important dietary resource during the Late Pithouse and Classic Mimbres Periods. The relative contributions of other potential plant resources to prehistoric diet between these two time periods is believed to have remained more or less the same throughout the sequence. Arguing by analogy to ethnographic and archaeologic examples, the dietary contribution of maize to the prehistoric occupants is estimated at 35% for the Early Pithouse Period and 50% for the later Periods.

The contribution of agricultural endeavors to subsistence for each period is then estimated. Using as analog the Eastern Pueblos, where the per capita amount of agricultural land has already been calculated, Minnis estimates that 0.4 hectares/person was necessary during the Early Pithouse Period, and 0.6 hectares/person for the later Period populations. Projecting these estimates into the past indicated that floodplain agriculture would have been insufficient to support the Classic and, perhaps, the Animas Period populations. These projections are refined further by assessing from the precipitation record whether certain periods had reliable or extremely variable moisture availability. The insights from these estimates are useful: the early portion of the Classic Mimbres Period had a very favorable agricultural climate, but the later (1090-1149 A.D.) portion experienced much less favorable conditions, hence greater stress.

Estimation of subsistence is completed by calculating net exploitable productivity of the entire study area. The relevance of these estimates is that if productivity of the prehistoric agricultural system was at any time insufficient to support the population, wild food use would be expected to make up the deficit. In estimating exploitable

productivity, Minnis combines a variety of productivity estimates that include contributions for all trophic levels with reasonable assumptions concerning the useable fractions of total ecosystem productivity. Here, as with the calculation of agricultural needs, the model would have benefitted from inclusion of variance estimates for each parameter. Though it would have resulted in an increase in model complexity, the gain in resolution would seem worth the investment. After considering all inputs, it seems clear that during the Late Pithouse and Classic Mimbres Periods, population increase outstripped adequate available agricultural lands during a period when insufficient moisture would have made it difficult to supplement dietary needs by harvesting wild plants and animals.

Having documented stress, Minnis proceeds to assess the social and economic changes his model proposes (Chapter Six). Architectural changes only suggest there might have been social system change with increased stress. Economic change is examined by assessing the relative difference in intra- and extra-regional exchange that took place from Early Pithouse to Classic Mimbres Periods. Though evidence is only suggestive, trends in the relative quantities of exotic vs. local products indicate that during the period of greatest stress intra-regional exchange increased while extra-regional interchange decreased. Hence the model in its original formulation seems more or less correct: with increasing subsistence stress, the population's response is to intensify agricultural production, and when this fails the social groups undergo requisite changes in sociopolitical organization, and possibly also experience increased intra-regional economic interaction.

The use of analogy to infer various aspects of prehistoric subsistence is a common approach in archaeology. The more attributes shared between analog and subject society in, for example, level of sociopolitical integration, subsistence regime and environmental context, the more direct and appropriate the inference. Minnis relies heavily upon analogy to estimate many parameters of agricultural subsistence [percent of cultigens [maize only] in diet, necessary per capita agricultural land, maize yield per hectare], but in most situations he selects one from a number of quite disparate estimates. One can perhaps see the need to focus upon a single estimate, but inclusion of minima and maxima, or some other measure of variation for each estimate from the numerous potentially useful analogs, would have greatly increased the model's resolution.

The study as a whole is beautifully conceived and executed. No stone is left unturned in searching for data useful in describing system variables. Methods of estimating system attributes are well reasoned, though each estimate should have included some measure of variation to obtain a more robust approximation of systemic variation. In *Social Adaptation to Food Stress*, Minnis gives us an excellent approach to problem-oriented archaeological research that will serve as a baseline from which future studies in the Southwest and elsewhere can be formulated.

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**Nutzpflanzen in Deutschland: Biologie und Kulturgeschichte.** Korber-Grohne, Udelgard.  
Stuttgart: Theiss. 1987. Pp. 490. 29.50 in Great Britain.

The principal aim of this book is to chart the history of field crops in Germany, excluding fruits but including vegetables, dyeplants, and oilseeds. This aim is achieved by a thorough survey of all available archaeological evidence (the author is a distinguished archaeobotanist) and of literary sources such as herbals and agricultural histories. The rise and (in many cases) fall in popularity of crops right up to the twentieth century are covered with the aid of numerous distribution maps, which often extend to include Europe as a whole. Comparatively recent introductions, such as maize, potatoes, and tomatoes, are included, as are even minor ancient domesticates of Europe and the Near East. These parts of the book will be of great value in their own right to those interested in the prehistory and history of farming in Europe.

What makes this book really special, however, is the copious ancillary information provided for each of the 60-plus species covered. The section for each species begins with a useful description of the appearance of the plant, supported by one of the chief glories of the book: its illustrations. These include many clear line drawings of whole plants and 132 well-reproduced photographs (many in color) of the ancestral wild plants in their original habitats, of the crops in cultivation, and of illustrations in medieval herbals. Seeds are also depicted in many photographs and drawings that will be of use to the practicing archaeobotanist. In addition, the domestication and spread of each species is described, often at length, and again often supplemented by distribution maps. Although these sections sometimes lack the most recent literature references, they are very useful syntheses. The author concludes with a short period-by-period summary of changes in crop use in Germany's past, and a bibliography of some 300 references.

This book is a remarkable and thorough *tour-de-force* and it is reasonably priced given its size and handsome standard of production. It is botanically accurate, clearly written, and comprehensible even to those with only a fair reading knowledge of German. In any event, the plates alone are enough to make the book a pleasure to handle. Korber-Grohne's work will clearly be a standard source for many years to come and should be owned by all ethnobotanists interested in Old World cultivated plants.

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