

## LITERATURE CITED (continued)

- Manual para Promotores en Salud. 5th edition. 1986. CETA, Iquitos.
- REGAN, J. 1983. *Hacia la Tierra sin Mal: Estudio de la Religión del Pueblo en la Amazonia I-II*. CETA, Iquitos.
- TKU 87/XXX. Tradition Archives at the Institute of Folklore and Comparative Religion, University of Turku, Finland.
- VALDIZAN, H. and A. MALDONADO. 1922. *La Medicina Popular Peruana: Contribucion al Folklore Medico el Peru I-III*. Imprenta Torres Aguirre, Lima.

## BOOK REVIEW

**The Fascinating World of the Nightshades.** Charles B. Heiser, Jr. New York: Dover, 1987. Pp. ix, 200. \$5.95 (paper).

The "nightshade family" (Solanaceae) has few rivals in the plant kingdom for sheer number and diversity of genera and species used by human beings—as foods, medicines, poisons, drugs, and ornamentals. One could not hope to survey the family systematically in a slim volume, nor is that Heiser's intention. Rather, the book is a selective celebration of the "nightshades," an unabridged and corrected republication of his earlier popular work, *Nightshades: The Paradoxical Plants* (San Francisco: W.H. Freeman, 1969). In a new preface, Heiser notes changes in scientific names of the plants discussed and refers to the published proceedings of two major Solanaceae conferences held since his book was originally published. Otherwise, however, there has been no attempt to expand or update the earlier text. For his purposes, this seems unproblematic.

Following a brief prologue that sketches the principal characteristics of the family, nine chapters focus on New World "peppers" (*Capsicum* spp.); the potato; eggplant; tomato; black nightshade or "wonderberry" (*Solanum nigrum*); a variety of lesser food plants; several containing powerful alkaloids, such as mandrake, jimson weed, henbane, and deadly nightshade; tobacco; and flower garden ornamentals. In each case, superb line drawings by Marilyn Miller (and sometimes photographs as well) complement the text. While treatment of the botany of the plants varies in detail from chapter to chapter, each is accompanied by selected references to refer the reader to the more technical literature.

For each plant discussed, we are given information on its homeland and traditional uses; the plant's "discovery" by Westerners; economic and other factors involved in its adoption and diffusion; folk beliefs, especially in Western communities; cultivation techniques; and general botanical description. Throughout, the emphasis is on the "story" of the plant, and the stories told are, indeed, fascinating. The general reader is well-served by this accurate compendium and the professional will find much of interest, too. The very attractive price should make it a potentially useful supplementary text in undergraduate courses on Economic Botany.

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## BOOK REVIEW

**Amazon Frontier.** John Hemming. Cambridge, MA: Harvard University Press, 1987. Pp. 647. \$29.95 (cloth).

If tropical rainforest ecosystems are to be preserved for future generations and managed to provide a sustained economic return, then more emphasis must be placed on the utilization of non-timber products. Almost every important tropical food, medicine, oil, fiber, etc., was first learned of from local aboriginal peoples. Consequently, in the search for new and useful forest products, we must continue to expand ethnobotanical research efforts.

The absence of a thorough overview of the history of Amazonian Indians has been a stumbling block for ethnobotanists for many years. In 1978, John Hemming published his classic, *Red Gold: The Conquest of the Brazilian Indian*, which covered the years 1500-1850 in a scholarly, yet accessible, format. *Amazon Frontier* is essentially a companion volume which picks up where *Red Gold* left off. Hemming has once again done an extraordinary job of pulling together a wide variety of information to tell a difficult story. This history of the Indians of the Amazon Basin is not confined to Brazil, but also involves Portuguese royalty, German clergymen, French diplomats, Peruvian rubber barons, Dutch traders, and British botanists, and it is, for the most part, an extremely depressing tale.

I do have a few minor criticisms. The book is entitled *Amazon Frontier*, yet many of the events described take place outside the Amazon. For example, the book's attractive cover is adorned with the famous Richter painting of Prince Maximilian zu Wied-Neuwied, best known as an explorer of eastern Brazil, and the Indian guide at Maximilian's side is generally believed to be from the Botocudo tribe of Brazil's Atlantic forest region; as far as I know, neither Prince Maximilian nor his guide ever set foot in the Amazon.

My other concern has to do with the use of Latin names for plants mentioned in the text. Though it may be somewhat unfair to expect an anthropologist to use Latin names, consistent inclusion of this terminology would have made the book a more useful scientific tool. The author uses scientific names in some instances but not in others (e.g., on p. 44 the scientific name is included for "cravo" but not for Brazil nuts or ipecac).

There are two sections of the book which will be of special interest to the economic botanist. The first is an intriguing section on the rubber boom, and the second an Appendix which gives excellent capsule biographies and itineraries of over sixty travellers, scientists, and artists who visited Brazilian Indians. This latter is particularly useful for those of us who know these people only as authors, and lack the biographical data to understand them in a historical context.

I consider this to be an excellent book which will serve as an indispensable reference for the ethnobotanist or anyone who is interested in conservation, Indians, and the Amazon. One can only hope that Hemming will write the next chapter at a time when there will be happier tales to tell.

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## LITERATURE CITED (continued)

- STRATHERN, A. J. and M. 1968. Marsupials and magic: a study of spell symbolism among the Mbowamb. Pp. 179-207 in Leach, E.R. (ed.): *Dialectic in Practical Religion*. Cambridge Univ. Press.
- STRATHERN, M. 1968. Popok: the question of morality. *Mankind* 6(2):553-562.
- TELBAN, B. 1988. *People, Illness and Plants: Ethnomedicine in the Highlands fringe of New Guinea*. M.Sc. Thesis, Univ. of Zagreb.
- WEINER, M. A. 1971. Ethnomedicine in Tonga. *Econ. Botany* 25(4):423-450.
- WELSCH, R. L. 1982. *The Experience of Illness among the Ningerum of Papua New Guinea*. Ph.D. Thesis, Univ. of Washington.
- WIRSING, R. I. 1985. The health of traditional societies and the effects of acculturation. *Current Anthropol.* 26(3):303-315, 319-322.
- YOUNG, A. 1982. The anthropologies of illness and sickness. Pp. 257-286 in Siegel, B.J. (ed.): *Annual rev. Anthropol. California*.

## BOOK REVIEW

**Pharmacopées traditionnelles en Guyane: Créoles, Palikur, Wayãpi.** Pierre Grenand, Christinan Moretti, and Henri Jacquemin. Collection mémoires No. 108. Paris: Institut Français de recherche scientifique par le Développement. 1987. Pp. 569 + 76 colored plates. n.p.

The meticulous work of Drs. Grenand, Moretti, and Jacquemin is immortalized in one of the most complete and beautiful works in ethnobotany and ethnomedicine/ethnopharmacology that has ever appeared in any language. *Pharmacopées traditionnelles en Guyane* is an ethnobiological achievement as well as a superb scientific contribution to our understanding of native and creole knowledge and use of medicinal plants.

This volume not only discusses the medical concepts of the three groups studied (the indigenous Palikur and Wayãpi, and the Créoles of Cayenne), but it also offers linguistic details of plant names and variations in names between groups. In addition, ethnographic detail is provided for each entry in the pharmacopoeia, including data on plant selection and medicinal preparations. To make this work even more distinct, pharmacological data are also provided for many of the major species. Complementary bibliographic data on the plants and pharmacological sources also contribute to the scientific quality and value of the volume. Numerous magnificently-done colored plates not only enhance the utility of the work by providing visual guides to many of the plants discussed, but they also mark the exceptional quality of production of the book.

Botanists, ecologists, anthropologists, physicians, and pharmacologists interested in traditional medical and pharmacological knowledge *must* have this book, which will undoubtedly serve as a standard for ethnoscientific research for many decades to come.

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TABLE 1.—*Botanical life-forms in 47 varieties of European Romany (after Wolf, 1960).*  
(continued)

5	[5.14]	Serboianu: <i>chásh</i> 2. <i>daro, daru, chopácho</i> 3. <i>cear</i> 4. <i>túfa</i> ..... 4
D	[5.14]	Finck: <i>kašt</i> 2. <i>ruk</i> 3. <i>tšār</i> 4. <i>bor</i> ..... 4
10	[5.23]	Wratislaw: <i>kašt</i> 2. <i>ruk, lithi</i> 3. <i>čar</i> 4. <i>porr, pore, bura</i> ..... 4
6	[5.23]	Colocci (Balk.): <i>kasht, kash</i> 2. <i>ruk</i> 3. <i>tchar</i> 4. <i>rukoro</i> ..... 4
8	[5.59]	Jesina: <i>kašt</i> 2. <i>ruk, lithi</i> 3. <i>čar</i> 4. <i>bura</i> ..... 4
B	[5.68]	Hrkal: <i>kašt</i> 2. <i>ruk</i> 3. <i>čar</i> 4. <i>bor, bur, bura</i> ..... 4
2	[5.86]	Uhlik: 2. <i>kaš</i> 3. <i>čar, štoro, štaro, šturo</i> 4. <i>bur, rugo, hrgo</i> ... 4
o	[5.95]	Kraus: <i>kascht</i> 2. <i>ruk</i> 3. <i>tschar, tscharr</i> ..... 3

[99.98% total]

## BOOK REVIEW

**The Peyote Book: A Study of Native Medicine.** G. Mount. Arcata, CA: Sweetlight Books, 1987. Pp. 80, \$7.50.

The American Indian has consistently had to fight for his religious right to use the peyote cactus, a completely unaddictive psychoactive drug basic to a cult that has done wonders against alcoholism and other problems and for native respect among American Indians through the Native American Church. Some of our western and southwestern states have enacted oppressive laws against the native religious use of peyote, quite against Federal laws that permit its ceremonial use.

This little book should be had by anyone interested in the ethnobotany of peyote and in the rights of a true minority to practice its own inoffensive religious practices based on an inoffensive plant.

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## BOOK REVIEW

**Late quaternary Mammalian Biogeography and Environments of the Great Plains and Prairies.** Russell W. Graham, Holmes A. Semken, Jr., and Mary Ann Graham (eds.). Springfield, IL: Illinois State Museum Society. 1987. Pp. xiv, 491. \$20.00. (paper).

This volume, dedicated to Ernest L. Lundelius, Jr., is an anthology of 12 papers by 15 authors focusing primarily on the Northern Plains and Midwestern prairies. It contains general (3), regional (4), and local (5) discussions on late Pleistocene and Holocene mammalian records (primarily for micromammals), an appendix on scientific and common names of the animals discussed, and an index to the localities discussed.

The initial paper, by Graham and Semken, is on philosophy and procedures in paleoenvironmental studies, and it acts as an introduction and guide for the volume. It also is the most important contribution in its attempt to solidify methodological underpinnings for paleoenvironmental studies. An array of concepts are brought together in a well-stated synthesis. The major topics are problems in interpretation and methods of analysis. A number of important points are made that frequently have been overlooked or not considered, e.g., that interpretation is based on the identification of the skeletal remains and is only as good as the quality of the identification work. In most cases, identifications need to be on the specific level to be useful. This can be difficult at times given the material recovered and the identification of some modern species on non-osteological traits. Their point is the need to document and thereby establish osteological criteria which everyone can agree to use. A point not made but equally important concerns the training and competence of the identifier. Far too many remains from far too many sites have been identified from books or inadequate comparative collections by people not equipped to conduct the analysis.

Another problem area in interpretation is that of chronology. A rigorous chronological framework is mandatory for interpreting temporal changes in faunas and reconstructing paleoenvironments. A point well made is the time-transgressive nature of cultural stages coupled with relative or imprecise dating. This same problem is prevalent in paleontological faunas where biostratigraphic age is used. Taphonomic problems are of major importance to paleoecologic interpretation. The reader is cautioned to compare only local faunas that have undergone similar taphonomic pathways. Concomitant with that cautionary note is the plea to collect faunal samples by comparable methodologies. Furthermore, while the need for analogs is clear, modern analogs may not be the most appropriate to use. Faunal community members react independently to climatic and environmental changes and not as a whole community. This independent reaction is part of the basis for the concept of disharmonious faunas. This concept, pioneered by Semken, concerns ecologically incompatible species found as community members in fossil assemblages. The point is that no one area today duplicates the conditions of the late Pleistocene or for some time into the Holocene.

The section on methods of analysis focuses primarily on determining the area of sympatry and species composition. The area of sympatry is that geographic region where the modern ranges of all or most of the taxa overlap. The method provides evidence of environmental change when an area does not include the fossil location.

The more distant the sympatry from the fossil location, the greater the degree of change. If the fossil fauna contains allopatric species (i.e., they have exclusive ranges), then the fossil fauna is a disharmonious one. Frequently, the late Pleistocene and early Holocene faunas, because they are disharmonious, have at least two areas of sympatry. Once again, the point is that no modern analog exists: no one place or location duplicates or comes close to the conditions during those times.

Species composition is a complementary concept and analytical tool that relies primarily on environmental parameters that control the modern distribution of a species. Primary differences between area of sympatry and species composition include the importance of limiting factors and disjunct distributions to species composition. Microenvironmental data are particularly valuable in the analysis of species tolerances as limiting factors, while these aspects are not useful in determining area of sympatry. Species composition analysis leads to the creation of environmental mosaics and the concept of patchy vegetation.

Wendland, Benn, and Semken attempt to evaluate climatic changes based on faunal evidence. They focus on Holocene climates based on the data presented in the volume and infer paleoclimates from changes in faunal distribution. The premise is that the record of plains biotic history is a direct expression of climatic results and that mammals provide good insight into the nature of the grasslands. The temporal fluctuations are based on Wendland's major climatic episodes. The post-Atlantic periods are lumped together because of insufficient faunal data, with the focus primarily on the Atlantic period (8,500-5,000 BP) on the Northern Plains and Midwestern prairies. An important point made is that while climatic changes may be abrupt, environmental changes lag and may be both time and spatially transgressive.

The last paper, by Semken and Graham, is presented as a summary but it is more a summary of their previous statements than of the volume. Five major points are discussed in relationship to the philosophy and methodology presented in the introductory paper. In determining the nature of the climatic signal provided by the faunal data, both the overall composition and the number of allopatric species are important. Reliability is based on accurate identification, documentation, and systematic guidelines. Given the bandwagon effect in zooarchaeology over the past decade or so, this point cannot be stressed too often. Finally, collecting methodologies which greatly influence the usefulness and comparability of the faunal data must become standardized. Their plea is to go beyond the "one-liter sample syndrome" to employ well-controlled collecting on a bulk or spatial basis. "Bulk" is interpreted as stratigraphic column sampling adjacent to excavation areas, whereas "spatial" apparently means collecting within the excavation areas.

This volume makes two major contributions. First, it is a solid presentation of paleoenvironmental methodology as applied to the Quaternary record and suggestions for the further development of that interdisciplinary study. Second, as a synthesis of a large body of faunal data, it is a source book for the Northern Plains and Midwestern prairies to complement earlier (1983) syntheses by Lundelius and Semken in the 2-vol. *Late Quaternary Environments of the United States*.

The volume is not without problems. The "Plains" are divided up unusually, with northeastern Colorado considered with the "Southwestern Plains" while Oklahoma is considered to be Central Plains. The "Southwestern Plains" appears primarily to focus on Central Texas and the Val Verde area (Texas) where Lundelius has done most of his North American research.

In general the Southern Plains receives limited treatment, with some out-of-date

or not pertinent references being used. For example, in the general paper on evaluating climatic changes based on faunal evidence, the Southern Plains data are not considered. Central Texas data are summarized for the Late Glacial period, but the Atlantic and post-Atlantic discussions focus on the Northern Plains and Midwestern prairies. The Val Verde and Trans Pecos (Texas) data for the post-Atlantic period are summarized and then generally extended to cover the "Southwestern Plains." Wendland *et al.* (p. 469) make the statement that after 5,000 BP "more moist conditions returned to the northern plains while in the southern plains the climate apparently continued to become more xeric, perhaps occasionally punctuated by short intervals of moisture." Data from the Southern Plains demonstrate that this extension is not valid. The Southern Plains experienced a two-drought altithermal between 6,400-4,500 BP with a return to moisture and an ameliorated climate by 4,500 BP. That situation began to change towards more xeric conditions after 700 BP (Holliday 1985; Hall 1988). Furthermore, Dillehay's model of the presence/absence of bison was used despite demonstrations that the model is not valid for the Southern Plains and Northcentral Texas.

A great deal of "finger-wagging" occurs aimed at archaeologists and their field methods and collecting techniques. While the admonishments are well deserved and heartily endorsed by this reviewer, paleontologists deserve the same treatment. Far too many cave localities have been quarried-out with little regard for associational and taphonomic relationships or, at times, even stratigraphy. A more constructive, even-handed review of collecting problems and solutions would be beneficial. Both archaeological and paleontological localities should be collected in a very tightly controlled manner in well-dated context related to natural stratigraphy. At archaeological sites, those units must be related back to both the natural and cultural stratigraphies without crosscutting boundaries and mixing samples.

All in all, this volume is a thought-provoking and solid contribution to Quaternary studies. It is a fitting tribute to Ernest Lundelius, his unquestionable influence on the development and direction of Pleistocene and Holocene vertebrate paleontology and paleoenvironmental studies on the Plains and Midwestern prairies, and his place alongside other "greats" such as Claude Hibbard and John E. Guilday.

#### References Cited:

- Hall, Stephen A. 1988. Environment and archaeology of the Central Osage Plains. *Plains Anthropol.* 33(120):203-218.  
Holliday, Vance T. 1985. Archaeological geology of the Lubbock Lake Site, Southern High Plains of Texas. *Bull. Geol. Soc. Am.* 96:1483-1492.

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## BOOK REVIEW

**Birds of my Kalam country / Mnmon yad Kalam yakt.** Ian Saem Majnep and Ralph Bulmer. Illustrations by Christopher Healey. Auckland: Auckland University Press and Oxford University Press, 1977. Pp. 219.

Ian Saem Majnep is Professor Bulmer's informant, native consultant, and colleague. This work is truly collaborative both in its organization and in its text. It is a winning combination: Bulmer has had over twenty years field experience in the East New Guinea Highland region; Majnep's experience is life-long, raised on the forest edge in the Schrader Range above the Kaironk Valley, home of the Kalam language group, and learning the forest fauna as a child in the company of his widowed mother.

The book's most outstanding quality follows from its authorship; it is not only an account of the native viewpoint but also by a sophisticated native participant (Majnep's contributions are panted in Bodoni type), though by virtue of Bulmer's commentary and clarification (printed in Univers type) and Healey's fine drawings, for a broad audience of English-speaking cultural anthropologists and natural historians. Majnep is truly a folk scientist, comparable as an observer of pattern in nature to a Darwin or a Wallace, if not destined to design a revolutionary theoretical perspective. Consider the following account (p. 60):

"Although we call *ksks* and *bdon* [(adult male and unmarked, respectively) Princess Stephanie's Bird of Paradise] by different names you can say that *ksks* are a kind of *bdon*, because some *bdon* grow into *ksks*, and these are the males. We know that this is so, for we see birds with their plumage changing. First the head changes; then the striped brown breast of the *bdon* is replaced by the dark green and blue breast of the *ksks*; and lastly the long black tail grows. In the first year that it changes it does not grow a full tail—only *slp* ['shoots']: In the second year its tail is complete.

" . . . *ksks* stay hidden in the mountain forest, but *bdon* quite often come into old gardens at the forest edge. They eat many kinds of fruit in trees and shrubs and vines and in low vegetation, and we believe that they propagate *klmn* [*Trema orientalis*], *slwal* [a tree rather similar to *Trema*], and *sanep* [*Alocasia*, the wild taro] . . . They choose different sorts of display trees from those of the Sicklebills, ones with a long straight bare branch with no foliage or epiphytes on it for a considerable distance, and coming out at an angle, not horizontal, from the trunk. First the *bdon* come, and call out, then the *ksks*. If five or six *ksks* come, then two or three station themselves at each end of the display-branch and dance there, then they change places, those from one end going to the other, and so on."

This account might have been quoted from Bent's *Life Histories of North American Birds* or any comparable treatise of avian natural history. Note the care in establishing the basis of the knowledge reported: "We know that this is so, for we see . . ." and "we believe that they propagate . . ." As Majnep notes by way of introduction: "To tell you what you yourself have seen and know to be true is easy; to fit together all the things that other men tell you, and decide which of the things they say are true, is much more difficult" (44). A New Guinea native cut from the "cake of custom" speaking! In addition these quotes neatly clarify the relationship of nomenclature to classification (in an instance of overdifferentiation) and of the native view of intra-cultural variation.

Yet Majnep continues his earlier account noting that, "Before men try to shoot

*kaks* at a dance-tree they perform rituals to drive away the goblins—one of them involves shooting a stem of *kapyeed* [*Phragmites karka*] over the top of the display tree—and there are spells recited at the base of the tree, so that the ghosts both get rid of the goblins and prevent the thoughts of members of the hunters' families, if they know where they have gone, from following them and disturbing them so that they don't shoot straight" (60). And he provides this testimonial (40): "Although I am now a Christian, I believe in this ritual, for I have seen it work. I have seen a man, one of my mother's brothers from Simbai, perform this ritual, and strike the ground with his heel, and make a sorcery stick . . . jump right up out of the ground, where it had been concealed."

At this point the "natural historians" among us scratch their heads while the "cultural anthropologists" among us perk up their ears. Majnep is a scientist operating without an axiom of strict mechanical causation, but a scientist nonetheless.

Bulmer's contribution is low key, just enough to clarify what Majnep takes for granted yet no more than is necessary to highlight the accuracy of Kalam observation. The value of an ethnographer who is also an accomplished amateur natural historian is suggested by Majnep in this back-handed aside (122): "Archaeologists are funny people, they just call these things (flying-fox wing bones used by Kalam today as head-scratchers) 'bone-points' and some of them never get the message about what animal they come from or what they are used for." It is just such essential detail carefully informed by a keen interest in all aspects of natural history that illuminates Bulmer's commentary.

The book is in three parts, an ethnographic-ecological introduction, then 18 short chapters on each major "covert category" of birds recognized by Majnep (including bats and the cassowary for completeness), followed by 6 Kalam stories about birds. Appendices list all recorded bird species with their Kalam designations in scientific and Kalam alphabetic order as well as all plants mentioned in the text. Bulmer here has allowed the Native to speak for himself, and he has spoken clearly and eloquently of his partnership with nature.

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## BOOK REVIEW

**Persephone's Quest: Entheogens and the Origins of Religion.** R. Gordon Wasson, Stella Kramrisch, Jonathan Ott, and Carl A.P. Ruck. New Haven: Yale University Press, 1988. Pp. 257, illustr. \$30.00 (cloth).

This book is a group of essays, several by Wasson and others by three of his collaborators. The first is a charming summary of Wasson's discoveries with his wife, Valentina Pavlovna, regarding Vedic *Soma*, Aztec *teonanacatl*, a shamanic *velada*, the "one-legged man" of Herodotus, the LSD-like smut of barley in the Greek Mysteries. The identification of the fly-agaric *Amanita muscaria* with the lost psychotropic *Soma* of the Rig-Veda is a well-founded triumph of modern humanistic scholarship. Wasson produced a seemingly endless series of fascinating insights into the ethnological significance of various mushrooms and other mycological phenomena. Another valuable insight is Wasson's use of the flower-covered statue of Xochipilli as a Rosetta Stone for identifying Aztec hallucinogens.

The second essay by Wasson, identifying the thunder-lightning engenderment of mushrooms (a folk belief found in both the Old and New Worlds) is in the reviewer's opinion another sound demonstration of relationship, accompanied as it is in each case by the same mushroom species, the connection with the same high good Thunderbird-Eagle in both hemispheres, etc. Other conjectures, often framed as tentative queries, are not so impressive. For example, the first part of "Mycenae" as the mu-epsilon-kappa root for "mushroom" is provocative, but not proven. The burial in earth of the seed of Ceres, goddess of grain, imprisonment by the god of the underworld, the wailing of winter winds, and the resurrection of Persephone ("against death") in the Spring—all this sounds like a transparent parable of the planting and growth of winter wheat (or an alternate explanation, the Greek custom of underground winter storage of baskets of seed grain). That the Greek Mysteries included the eating of the ergot of grain (probably barley) has convincing support in classical references.

But mycological enthusiasm perhaps leads sometimes into the quite unlikely. The Biblical "Tree of Knowledge" is probably *not* related to *Soma* or *A. muscaria*. I am not convinced that the swastika and other *grecas* (Greek frets seen in visions) are a plausible source of the Platonic "Ideas." *Soma* is surely not the sole or even principal source of historic religions, for all the important part it had in a forerunner of Christianity. The use of red ochre in prehistoric graves more likely symbolized blood-fire-life than the red color of the fly agaric. The "one-sided man" of folklore, like the one-footed humans of Herodotus, may imply the one-footed mushroom or *Soma*, but Satan is not so much "one-legged" as he is provided with a goat's hoof on one of his two feet. That the Hindu cow is sacred because *Stropharia cubensis* sometimes grows in its dung is a very tenuous thesis also, in view of the many alternative Indic symbolisms from Mohenjo-dara onward.

Kramrisch's essay on *putika* as a surrogate for *Soma* in the Santal Parganas, in connection with the Mahavira Vessel (head of Indra, or the Sun), is the redaction of a justly celebrated study in the *Journal of the American Oriental Society*. Her thesis, in this reviewer's opinion, is thoroughly established. Wasson's third essay, on the last meal of the Buddha as a psychotropic mushroom, is carefully argued, but the final judgment must be left to experts. Jonathan Ott has a brief essay on the disembodied eyes at Teotihuaca in Mexico.

The second half of the book consists of three learned essays by the classicist Carl A.P. Ruck. The first is a captivating explanation of the "shade-foot men" of Herodotus and others as the one-legged mushroom "parasol" of *Soma*; Socrates as the profaner of the Mysteries (convincing); and Prometheus as Shade-Foot and thief of fire. The second essay is on the discovery of wine, and the third on offerings from the Hyperboreans, a most enlightening study. Ruck's essays are arguably the most revealing in the book.

Strong objections, however, must be launched against the proposed neologism "entheogen." First of all, a term should not embody a controversial theoretical assumption (e.g., "psychedelic"). Second, the "power" American Indians find in hallucinogens is not sufficiently personalized or individuated to be dubbed "god," nor do classic peoples conceptualize hallucinogens in this way. And third, the term is etymologically awkward. If a *hallucinogen* engenders hallucinations, and *hydrogen* engenders water when oxidized, then *entheogen* must engender gods within: itself? the user? Wasson's violent objection to "hallucinogen" is captious—"a lie is the essence of 'hallucinogen'" (p. 30)—or a term contaminated since also used of hippie "entheogens." Nor can *Cannabis indica*, favorite of the god Shiva, be flatly pronounced non-entheogenic because also used by the non-genteel. The United Nations officially uses the impersonal term "psychotropic," as indeed does Kramrisch in her study. "Psychotropic" is to be recommended for all properly objective usage.

The essays must, therefore, be regarded as quite uneven in their quality. It is saddening to realize that these will be the last in Wasson's brilliant series.

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