Sanskrit, synonyms, family, distribution, parts used, and active constituents of 456 aphrodisiac plants belonging to 331 genera in 116 families, of which 2 species (2 genera) are fungi, 2 species (one genus) are lichens, 6 species (5 genera) are Pteridophytes, 6 species (3 genera) are Gymnosperms and the remaining 456 species (320 genera) are Angiosperms. The arrangement of taxa is alphabetical by genus name. There are several appendices; one contains a list of plant families represented. The others give English, Hindi and Sanskrit names, and Latin binomials. The References (six pp) consist primarily of [1] Indian floras and works about Indian medicinal plants, or [2] Western, non-scholarly, popular literature having some general content about aphrodisiacs. The book opens with color plates of plants. Some of these photographs are of limited helpfulness, since they are over-exposed or out of focus.

This volume fails to provide much insight about the wealth of ethnobotanical information from India, which the authors assert, because they have not linked folklore or the ancient Vedas, and 16th and 19th century Catalogs and Materia Medicas, with each plant registered. Plant descriptions lack any explanation of the method of use of each species or in explicit combinations of taxa, beyond name of plant part, with list of 'active constituents,' usually from a single cited source. To illustrate, a "decoction of pulverized seed and root" is all that defines aphrodisiac preparation of *Sesamum indicum* L. Here and elsewhere, the catalog of named constituents is incomplete or incorrect. Active constituents listed are: sesamolinol, seasamol [sic!] and ³-tocopherol. Concerning this and all species in their record, there is disconnect, because the active constituents mentioned are not necessarily those that would provoke aphrodisiac responses. The authors offer no classic formulations, or guidelines for administration in mixtures with other plant taxa, although the literature holds plentiful references.

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Mint: The Genus *Mentha*. Brian M. Lawrence (ed.). 2006. ISBN13: 978-0-8493-0779-9; ISBN10: 0-8493-0779-1 (hardcover, US $129.95). 576 pp. CRC Press, Boca Raton, Florida.

This text represents the 44th volume in the series: Medicinal and Aromatic Plants - Industrial Profiles, which endeavors to synthesize the published academic, health-related and industrial information pertaining to this economically important flora.

First, I have some comments on a few technical issues. I have seen this book referenced with two dates: 2006 and 2007. The confusion exists because the copyright date of the book is 2007, yet the actual publication date (provided by the publisher) is 12/13/2006. Consequently, I have opted to cite the date as 2006. The book is available only in hardcover binding, which appeared to be sound except for a slight flaw (wrinkle) in the corner of the front flyleaf in my copy. When laid flat, my copy remained open approximately from pages 100 through 500, despite the fact that the quires are glued, not sewn, which is a bit surprising given a book of this price. Some disappointing features included the rather drab, dark green cover (yuk!), the poor quality of the three color figures included, and fairly thin paper that resulted in a distracting bleed-through of text. The print quality was subpar. In many places the text was surrounded by nearly microscopic dots, which imparted a "smudged" appearance. Most of the figures were fairly sharp, although resolution was inconsistent among the various contributed chapters. There seemed to be no real effort by the editor to standardize the format of text figures, which reduced the level of continuity between chapters and made it fairly apparent that this was a collection of independently contributed chapters. On the other hand, some degree of standardization was achieved by the inclusion of a separate contents listing at the head of each chapter. Notable peculiarities included the color figures (Fig. 6.11; Figs. 10.3; 10.4), which are printed on two sides of a single page placed between pages 397 and 399. Oddly, Figure 6.11 is assigned to p. 398; whereas, Figs. 10.3 and 10.4 (on the other side) are assigned to "the color plate following page 398." Obviously there are not enough pages here and one gets the impression of entering a literary worm-hole trying to make sense of the strange notation. Moreover, all the color figures have black and white counterparts in the text, rendering one set redundant. Surely the color photos should have appeared in the proper position in the text in lieu of the black and white photos, or been eliminated entirely. It is surprising that such abnormalities exist, given that there is both a series and a volume editor.

Regarding a more substantial evaluation of the contents, this monograph contains 14 chapters written by 17 contributors representing six

countries (eight are from the USA). According to the publisher, this book provides_information on the "history, production, chemical constituents, market trends, and medicinal and nutritional uses" of the genus. There is one chapter devoted to taxonomy, three chapters on cultivation, three chapters on economic uses, with the remaining seven chapters on phytochemistry and production. Due to its rather narrow focus, this treatment would not be very useful as a textbook, but is most suitable for a specialist audience with a specific interest in the phytochemistry of essential oils in *Mentha* and their commercial production.

According to the publisher's promotional information, all mint taxonomists should be relieved to hear that the book begins with "a review of the correct taxonomy." This statement might be a bit optimistic. The chapter authors recognize 18 *Mentha* species (excluding *Mentha cunninghamii* as a possible member of *Micromeria*) based on their study of 27 morphological, cytological and phytochemical characters, which were analyzed using unweighted maximum parsimony (MP) and Neighbor-Joining (NJ) approaches. Actually, neither result was conclusive regarding the position of *M. cunninghamii*, given that the placement of the taxon was unresolved by both the MP and NJ trees (the latter labeled incorrectly as a phylogram), and not necessarily "outside the ingroup" as argued. Furthermore, the observation that only three nodes received internal support (i.e., bootstrap values) above 50% (51-66%) in the MP analysis should make anyone reluctant to accept that result as definitive in any case. The MP and NJ trees differed in topology as well, which is not surprising given the different models of analysis. Interestingly, the authors did not compare their result with the study by Bunsawat et al. (*Syst. Bot.* **29**: 959-964. 2004), which is included among the references cited in their chapter. The Bunsawat study, which incorporated combined cpDNA sequence data, clearly resolved *M. cunninghamii* within *Mentha* (in a clade with *M. australis*, *M. diemenica*, and *M. satureioides* [which, incidentally is misspelled as *sautureioides* in the book figures]), with 96% bootstrap support (and that clade was included within a monophyletic *Mentha* with bootstrap support of 98%). Consequently, I'm more inclined to accept the results of the molecular analysis, given the much better support associated with the MP results. There are a number of other disagreements between the morphological and molecular trees as well, but none is addressed. Also, the morphological analyses contained no provision for examining the status of the numerous infraspecific taxa recognized in *Mentha*, but evaluated characters only for 20 OTUs, which represented the accepted taxa. For example, two subspecies of *M. arvensis* are accepted in the text, but only *M. arvensis* (no suspecies indicated) is included in the numerical analysis. Similarly, four infraspecific taxa are recognized for *M. spicata* despite only one "*M. spicata*" OTU in their analysis. It still sounds as though there might be a bit more study needed before the "correct taxonomy" can be ascertained. Another problem involves the characterization of the numerous hybrids that occur in the genus. The authors recognize 11 named hybrids, based on quite diverse data in each case, with some supported by a plethora of genetic data and others based only on phenotype or "resynthesis". Undoubtedly there still is a great deal of genetic work to be done on these hybrids before their parentages can be understood definitively. This chapter does provide an excellent overview of the characters and states used taxonomically in the genus and includes extensive lists of synonymy and holotype repositories for the taxa accepted.

Chapter 2 is an interesting account of the biochemistry and physiology of essential oil production and micropropagation techniques. Here one can find comprehensive information on such factors such as the biochemical pathways relating to pulegone (which is a liver toxin in humans when metabolized to menthofuran), or the subtle chemical factors responsible for the different scents of spearmint and peppermint. The summary of micropropagation methods would be useful to those interested in commercial production. Chapters 3-5 summarize the commercial cultivation of Mentha taxa in the United States, India, and China respectively, and include useful information on production history as well as planting and fertilization methods, pest and disease management, and harvesting techniques. An entire chapter (chapter 6) is devoted to distillation of mint oil, but I found it odd that it included roughly nine pages of photographs of various distillation apparatus – one or two examples would have sufficed! One-hundred thirty pages in two chapters (nearly 23% of the book) are devoted to an exhaustive summary of the various chemical constituents of commercially important and other mints and their hybrids. There's not much prose here, but you will find an impressive, well-referenced, page-by-page listing of the various substances that have been found in these plants. The also is an entire chapter dedicated to the commercially ubiquitous menthol, which is found in numerous products.

Readers with an interest in medical or therapeutic applications of mint oils will find pertinent information in chapter 12, which focuses on their biological and toxicological properties. In fact, anybody who has ever taken or considered taking herbal supplements would be advised to read this section. There are two pages listing plant species that contain pulegone, which can have serious human health effects (see above). Notably, the American pennyroyal (Hedeoma pulegioides) has

been used extensively as an herbal folk medicine, and contains large quantities of this substance.

The final chapter on the economic uses of mints was a letdown; it comprised only three pages of text (with six pages of references!) and focused mainly on peppermint, menthol, spearmint and pennyroyal. By this time the reader has been bombarded by repeated references to those commercial products and it would have been nice to see this section expanded to present other examples of lesser-known uses of the plants (what about mint juleps, mojitos, teas, toothpastes, etc.?), economic summaries of mint-related products, or at least some novel information that hadn't already been covered. Also, this section focused much on the physiology and biochemistry of the products and really didn't address the economic aspects of the products very well at all. The book concludes with both a species and a subject index.

If you have an intense interest in mints, then you'll certainly find it to be a useful reference, even though it will cost you "a mint". Despite an unimaginative production that is like so many edited volumes, i.e., with poor continuity and structure among chapters, there is plenty of information with numerous references provided. On the other hand, if you have just a passing interest in the group, it might be better to look for it in the University library.– Don Les, University of Connecticut, Storrs, CT 06269-3043.

Sacred Gardens and Landscapes: Ritual and Agency. Conan, Michel, editor. 2007. ISBN 0-88402-305-2 (Paper US$35.00) 314 pp. Harvard University Press, 79 Garden Street, Cambridge, MA 02138.

Gardens reveal the relationship between culture and nature, yet within the substantial library of garden literature, *Sacred Gardens and Landscapes* is among the few to focus on what the garden means in the spirit realm. *Sacred Gardens and Landscapes* registers how various world cultures historically perceived, designed, used, and valued gardens. It probes the social and philosophical importance of the garden to individual lives and societies. It brings together essays from a variety of perspectives, organized around the metaphor that sacred gardens and landscapes engage their visitors into three circumscribed modes of activity: [1] as anterooms spurring encounters with the netherworld; [2] as journeys through mystical lands; and [3] as a means of establishing a sense of locality, metaphorically rooting the dweller's identity in part of the material world. Each suggests specific motivations for garden and landscape design.

Undeniably, *Sacred Gardens and Landscapes* is a magnificent compendium about a subject addressed by few writers: the mystical dimension of gardens. Editor Michel Conan is Director of Garden and Landscape Studies, Dumbarton Oaks. Author of ten scholarly books about gardens, he is well-positioned to solicit manuscripts from erudite authors working in assorted sub-disciplines, each an expert in their field. Thirteen contributing authors from Canada, Europe, Japan and the U.S. are among the world's principal thinkers and writers on the culture of gardens and bring years of critical assessment to the question of what the garden means. Their articles offer exquisite detail about narrowly defined subjects: surveys of rites in sacred gardens and landscapes, offering meaningful insights into the significance of plantings and their settings in the societies of India, ancient Greece, Pre-Columbian Mexico, medieval Japan, post-Renaissance Europe, and to some extent, America. Superb illustrations enliven each chapter with photographs of serene natural landscapes, ethnographic spectacles, and historic maps, details from ancient manuscripts, codices and cosmological works. Together these essays reveal the profound cultural significance of gardens previously overlooked by architectural studies of garden styles. They provide unique context to the fields of ethnobotany and economic botany. This exceptional compilation brings together sources that are not readily available to many readers, such as a much-cited 1982 PhD dissertation by D.E. Birge, University of California at Berkeley: *Sacred Groves in the Ancient Greek World*, in Bonnechere's article: 'The place of the sacred grove (*Alsos*) in the mantic rituals of Greece.'

Having asserted my intense admiration of this olume, as I examine *Sacred Gardens and andscapes* carefully in search of coverage about ome of my personally preferred subjects, I observe hat despite its wide scope, it is not entirely omprehensive. One omitted subject that would be good companion piece to García-Zambrano's'Ancestral rituals of landscape exploration and appropriation among indigenous communities of early colonial Mexico,' and that deserves meaningful consideration, is African sacred groves. Volunteer experience with Sacred Forests in western Kenya motivates this reviewer's investigation of that literature. Many published studies contribute to that subject, e.g., Prussin (1999), an overview of African sacred sites, with particular focus on the Cosmic Tree, Amoako-Atta (1998), details about sacred forests of Ghana, de Maret (2002) about the Congo, and Rodgers (1996) and Ylhäisi (2006) about Tanzania.

Sacred groves are present in Nigerian mythology too. The Osun-Osogbo Sacred Grove, containing dense forests, is located just outside the city of Osogbo, and is one of the last virgin high forests in Nigeria. It is dedicated to the fertility god in Yoruba mythology, and is dotted with shrines and sculptures. The grove was designated an UNESCO World Heritage Site (2005). The Osun Grove is