

BOOK REVIEWS

Medicinal Plants in Tropical West Africa. BEP OLIVER-BEVER, Cambridge University Press, 32 E. 57th Street, New York, NY 10022, 1986, xii + 375 pp., 15.5 × 23.5 cm., \$75.

Two of the more useful substances obtained from plants native to tropical West Africa are physostigmine, an acetylcholinesterase inhibitor used in the treatment of glaucoma, and thaumatin, an intensely sweet protein that is currently approved or awaiting approval as a food additive in more than a dozen countries. The plants of origin of these compounds, *Physostigma venenosum* Balfour and *Thaumatococcus daniellii* (Bennett) Benth., respectively, are included in this volume along with some 400 other species. Each is reviewed in terms of its local uses, known chemical constituents, and the demonstrated pharmacological activity of its extracts and/or active principles. The book covers species native to territory approximately bounded by Senegal in the west and Cameroon in the south and also mentions nonindigenous medicinal plants that are now cultivated in West Africa.

The volume is divided into seven chapters, with the first being a brief introduction that touches on the role of medicinal plants in traditional medicine in West Africa. The next two chapters deal in turn with plants that affect the cardiovascular and nervous systems. In the fourth chapter, higher plants with anti-infective activity are considered, both as antibiotics (antibacterials, antifungals, antivirals, antiprotozoals, and anthelmintics) and as insecticides or molluscicides. The final three chapters are primarily concerned with plants exhibiting anti-inflammatory, antifertility, and oral hypoglycemic activities. Separate listings of references are provided for each chapter, with the total bibliography constituting over 85 pages. The volume also presents a botanical index that mentions a common name and the family of each species listed.

The author deserves much credit for her efforts to deal with the question of botanical synonymy for the species covered in the book, as well as for the interesting synopses of the role of plants in the treatment of the various disease conditions surveyed. Unfortunately, there are a rather large number of inaccuracies in the sections on chemical constituents. For example, canthin-6-one is erroneously described as a phenolic alkaloid (p. 131); brucine is not a constituent of *Brucea antidysenterica* Lam. (p. 160); and euphol and euphorbol are triterpenes rather than sesquiterpenes (p. 169). A further error is the statement on p. 115 that irritant phorbol esters have been reported in the latex of *Euphorbia hirta* L. Such compounds have never been associated with this species, and, given the fact that phorbol esters may cause temporary blindness, their presence would certainly prohibit the practice of squeezing *E. hirta* latex into the eye to cure eye troubles (p. 113). There are also a large number of errors in the citation of authors' names in the bibliographic sections. The references are somewhat outdated in places but would still prove useful as the basis of a literature search for a given plant of interest.

Even if this book has its shortcomings, it does represent a much-needed contemporary text on the uses of medicinal plants from West Africa. It is to be recommended not only to natural product chemists working on tropical species but also to readers generally interested in the study of biologically active agents of plant origin.

A. DOUGLAS KINGHORN, *University of Illinois at Chicago*

Specification of Thai Medicinal Plants. FACULTY OF PHARMACY, MAHIDOL UNIVERSITY, Aksomrsampan Press, 20 Soi Samranrach, Bangkok 10200, Thailand, 1986, xviii + 125 pp., 19 × 26 cm., \$60.

This book is the first volume of a planned series dealing with the medicinal plants of Thailand. Volume 1 begins with 41 excellent color photographs of the 20 Thai medicinal plants that are subsequently monographed. Each monograph includes the scientific name, the Thai name, and the common English name of the medicinal plant as well as information concerning the distribution of the plant within Thailand, a botanical description, and the plant part used. The pharmacognostic characters (macroscopic and microscopic) of each plant are well presented. The macroscopic and histologic illustrations are drawn to scale and are of excellent quality. Each monograph presents chemical identification methodology, a list of isolated constituents, the ethnomedical uses, and the usual pharmacognostical constants. The monographs are well referenced and a list of literature citations is presented at the conclusion of each monograph. Additionally, there are two appendices. One details methodology, while the other describes reagents and test solutions used. It appears that much of the data presented in the monographs was accumulated by the 14 pharmacy faculty members from Mahidol University who authored this book.

Traditional herbal medicine is still widely employed in Thailand. In recent years, however, the authors have detected a considerable degree of confusion associated with several aspects of the use of Thai medicinal plants. The major problem perceived by the authors involves the proper identification of the plants used as folk medicines. This book was written and published in an effort to eliminate or at least reduce this confusion. The book may be of interest to the classical pharmacognosist and will probably be of value to herbalists in Thailand and neighboring countries.

WILLIAM J. KELLER, *Northeast Louisiana University*

Pharmacognosy, 9th Edition. V.E. TYLER, L.R. BRADY, and J.E. ROBBERS, Lea and Febiger, 600 Washington Square, Philadelphia, PA 19106-4198, 1988, viii + 519 pp., 18.5 × 26 cm., \$39.50.

This book is the latest edition of what has become the standard textbook of pharmacognosy in the United States. The stated objective of the book is to provide "comprehensive, accurate, scientific information of a biologic and chemical nature on the drugs of plant, animal, and microbial origin currently employed in medicine." In meeting this objective, the authors have provided a balance between the chemistry and biology of natural drugs that gives the book its unique value.

Although written primarily as a text for undergraduate pharmacy students, this text also serves as a valuable source book for anyone with an interest in, or need for, information about drugs of natural origin. As a textbook, it provides the student with an interesting and logical first approach to the subject. As a reference work, it gives sufficient information to begin a deeper study of a particular drug or drug class. The references at the end of each chapter provide access to more in-depth information.

Those familiar with earlier editions of this book will find the same overall organization and format. In keeping with the textbook objective, the book is organized into 16 chapters that break the subject matter up into segments that can conveniently be incorporated into a course outline. Those interested in the book as a reference will also find this organization helpful.

The publishers have printed this edition in a newer style type that appears to allow more to be printed per page but remains comfortably readable. There has been extensive editing of the book for this edition with the most significant changes appearing in the chapters on Antibiotics, Biologics, Vitamins and Vitamin-containing Drugs, and Herbs and Health Foods. Other chapters appear to be unchanged from the previous edition.

As with any book, there are, I feel, a few things that could have been done differently or should be changed. Although mention is made of products obtained from recombinant DNA technology at various places in the text, there is no organized coverage of this important emerging area in the book. This would have been appropriate in Chapter 1. The authors have chosen to provide coverage of the agents used primarily for anti-cancer therapy under their classical categories of either antibiotics or alkaloids. While this makes for easier organization, it might be better from an instructional viewpoint to place them into a separate chapter on anti-cancer agents. The section on the mechanisms of allergy in Chapter 14 should be updated to conform to current understanding of this topic.

I strongly recommend this book to anyone involved in the teaching of Pharmacognosy and/or Medicinal Chemistry. It is both an excellent text and a solid reference. The authors have maintained its value through numerous editions by not attempting to produce another textbook of natural products chemistry or a highly clinically oriented text of limited worth. Those working in natural products research will also find it a valuable resource work.

JOSEPH E. KNAPP, *University of Pittsburgh*

Continued from back cover

Phyllanthimide, a New Alkaloid from <i>Phyllanthus sellowianus</i> —Michael S. Tempesta, David G. Corley, John A. Beutler, Climaco J. Metral, Rosendo A. Yunes, Cesar A. Giacomozzi, and João B. Calixto	617
Additional Biologically Active Constituents of the Chinese Tallow Tree (<i>Sapium sebiferum</i>)—Sheng-Quan Liu, John M. Pezzuto, A. Douglas Kinghorn, and H. W. Scheld	619
Potential Cancer Chemopreventive and Cytotoxic Agents from <i>Pulicaria crispa</i> —M. A. al-Yahya, A. M. el-Sayed, J. S. Mossa, J. F. Kozlowski, M. D. Antoun, M. Ferin, W. M. Baird, and J. M. Cassidy	621
Sesquiterpene Lactones from <i>Mikania micrantha</i> —Maria Del R. Cuenca, Alicia Bardón, Cesar A. N. Catalan, and W. C. M. C. Kokke	625
Book Reviews	627
Errata	624