

Book Reviews

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BOOK REVIEWS

Protective Groups in Organic Synthesis. Second Edition. THEODORA W. GREENE and PETER G.M. WUTS. John Wiley and Sons, 605 Third Avenue, New York, NY 10158. 1991. xvi + 473 pp. 15.5 × 23.5 cm. \$59.95. ISBN 0471-62301-6.

The judicious selection of protective groups is a key aspect of almost all complex organic syntheses and is also important in synthetic transformations of natural products. The first edition of this book, published in 1981, was thus a welcome addition to the literature and rapidly established itself as a standard laboratory reference work. The publication of this second edition is further proof of the value and wide acceptance of this book.

The major change in this edition, besides a general updating of the literature and the addition of over 200 new protective groups, is the addition of new sections on the protection of some heterocyclic compounds (indoles, imidazoles, and pyrroles) and of amides. These are important additions for natural product researchers, particularly those in the alkaloid area. The heart of the book, however, remains its summary of protective groups for the major functional groups: alcohols (including diols), phenols, carbonyl groups, carboxyl groups, thiols, and amino groups. The book concludes with a set of reactivity charts that summarize the stability of 228 of the most widely used protective groups to 108 different reaction conditions. These charts, which are unchanged from the first edition, contain an enormous amount of information but must be regarded with a healthy scepticism since many of the reactivities indicated are inferred rather than experimentally determined.

To test the value of the book, I looked up a novel application of a protective group that my research group has been using as part of our work on taxol. The application was indeed listed, and had this book been available to us two years ago it would have saved a significant amount of literature searching. In this connection it is worth noting that articles with information on new protective groups are not always retrieved by computerized search services, and a compilation such as the present one is thus a necessary complement to these services.

In summary, this is the best available book on protective groups, and all natural products researchers who have to manipulate their compounds chemically will find it of value. In my own group, it is one of those books that I cannot keep on my desk; even my review copy disappeared into the laboratory before I could write this review, and prospective purchasers are advised to purchase two copies if they head up research groups.

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Contribution to Indian Ethnobotany. Edited by S.K. JAIN. Scientific Publishers, 5-A New Pali Road, P.O. Box 91, Jodhpur 342001, India. 1991. xv + 341 pp. 13.5 × 21.5 cm. Rs. 275. ISBN 81-85046-102-1.

This book, which has a deep-blue hard cover and a grass-green jacket, is a collection of 30 articles dealing with various ethnobotanical aspects of the ethnic groups or tribal peoples of the Indian subcontinent. Some articles represent research results, while other are a compilation or a literature review. All are of uneven depth and quality. Some of them are abridged, enlarged, or revised versions of papers previously presented in conferences and published in other books (post-1980), while others are specially invited articles. These articles (pp. 1-335) are preceded by a Foreword written by the world's foremost ethnobotanist, Richard Evans Schultes of Harvard University, a Preface by the Editor, S.K. Jain, a List of Contributors (32 authors) and a Table of Contents. The book concludes with Notes on Nomenclature, a section listing 92 taxa (species and genus) with their synonyms.

As stated by the Editor, the 30 articles are arranged in such a way "as to provide a coherent evolution of the subject," starting with an article on concepts and continuing with those dealing with folk beliefs (religion, mythology) and with regional tribes of India, and concluding with an article on the role of belief and folklore on sacred groves. Each article or chapter starts with an abstract and in most cases ends with a list of references; many of them are illustrated with black-and-white photographs. The body of the text in each article (including tables) is presented in various ways, without any particular format.

The main purpose of the book, according to the Editor, is "to familiarize the readers with some major areas of studies already in hand and to indicate the gaps in our knowledge of Indian Ethnobotany by regions, by tribes or by special subjects." List upon list of plants which have been claimed to be used in various aspects of the life of the Indian tribes, including medicinal uses, are given. From the point of view of readers of the *Journal of Natural Products*, it is these medicinal uses that would be of interest, since they represent leads for drug discovery.

Obviously, overlaps exist between articles with regard to uses and plant names, but since no index is provided in the book, there is no easy way to locate these names or uses. When it is realized that the book is a revised and modified edition of *Glimpses of Indian Ethnobotany* published in 1981 (as stated in the inside of the inner title page), it is only fair to expect that many improvements and corrections would have been made. Unfortunately, typographical and grammatical errors, lack of documentation in some articles; deficiency in not completely listing voucher herbarium specimens nor providing family names and full botanical names by including the authority in others, and lack of an analytical discussion and conclusions in many articles plague the book. An occasional carelessness of an author may even lead to a dangerous consequence, such as the listing of *Abrus precatorius* "fruit and seed" as a food on p. 268; such information should have been deleted. Lastly, the quality of the black-and-white photographs is in general poor.

As a "glimpse" into the Indian ethnobotany this book has certainly achieved its purpose. I recommend the book to researchers in natural products and in plant sciences in general. It would also make an important addition to the holding of any anthropological, botanical, and biomedical library.

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