

BOOK NOTICES

Seeds and Their Uses: by CAROL DUFFUS and COLIN SLAUGHTER. John Wiley, Chichester, 1980. 154 pp. £12.00 hardback, £4.95 paperback.

The seeds discussed and illustrated here are those of economic importance, i.e. cereal grains, oil seeds, coffee and cocoa beans, peas and other legumes. This is a straightforward concise account of their anatomy and general botany, of biochemical changes during maturation, of their nutritive values and their practical utilisation. There are good reference lists at the end of each chapter and there is also a very adequate index. Some topics are very sketchily covered, e.g. seed toxins, but in general there seems to be a good overall balance within the limits the authors have set themselves. Although intended primarily for students in applied biology, it should, nevertheless, be of value to plant scientists in general and will be a useful teaching adjunct for a course in economic botany.

Structure and Bonding, Volume 40, Biochemistry: edited by J. D. DUNITZ and J. R. GOODENOUGH. Springer, Berlin, 1980. 146 pp. DM 88 (ca £22).

There are four review articles in this issue of *Structure and Bonding*: metal-metal interactions in proteins (I. A. Cohen), non-heme iron dioxygenases (L. Que), the bleomycin antibiotics (H. Umezawa and T. Takita) and phytochrome (W. Rüdiger). Of these, only the latter is of immediate relevance to phytochemists. Dr. Rüdiger, who is distinguished for his structural studies on this elusive light receptor pigment, here presents a lucid and coherent account of the chemical, biochemical and biophysical experiments which have led to a series of chromophore conformations which explains, at least in part, the role of phytochrome in light reception and in photomorphogenesis. In a rapidly moving field it is unfortunate that a review published in late 1980 should contain literature references only up to mid-1978; nevertheless, this article is an excellent starting point for anyone wishing to follow recent developments in phytochrome research.

Les Polymeres Vegetaux: edited by BERNARD MONTIES. Gauthier-Villars, Paris, 1980. 346 pp. Paperback, price unknown.

This collection of essays deals with the non-nitrogenous plant polymers of storage and of the cell wall and is derived from a symposium held by French scientists at Grignon in September 1977. The book is fairly evenly divided between alicyclic polymers—especially the various polysaccharides of cell wall—and the aromatic polymers, the lignins and tannins. The 19 contributors mainly discuss ultrastructure and cytochemistry, methods of analysis and the structural significance *in vivo* and *in vitro* of the different materials. Since none of these topics is particularly fashionable at the present time, this book has much to recommend it as a general entry into the recent literature on the subject.

A Colour Atlas of Medicinal Plants of Japan: by J. TAKATORI, 2nd edn. Hirokawa Publishing Co., Tokyo, 1980. \$180.

In this splendid coffee-table book, Jisuke Takatori, Emeritus Professor of Pharmacognosy at Nagasaki University, presents his own colour drawings of some 205 species of flowering plants. While many of the illustrated species are indigenous to Japan, a significant proportion are from other lands so that the collection is representative of medicinal plants in general. For each species there is a brief botanical description in both Japanese and English together with an indication of the pharmacological activities and a list of active principles. Although the plates illustrate most parts of each plant, there is some emphasis on the organs of pharmaceutical interest. Thus a valuable feature of this atlas is the many illustrations of root systems, parts of plants poorly represented in most botanical drawings. Leaves, flowers and fruits are also widely included. In general, the many attractive plates faithfully represent the species chosen for illustration. A curious addition included at the end of the book, presumably for the sake of completeness, are some illustrations of animal organs including rhinoceros horns. Understandably, perhaps, no English translation has been given for their medicinal properties!

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