Book reviews

Ilic, J.: CSIRO-atlas of hardwoods. 525 pp.; 2889 Figs.; Berlin, Heidelberg, New York, London, Paris, Tokyo, Hong Kong 1991: Springer. ISBN 3-540-53242-0. Hardcover. DM 378,–
The CSIRO-atlas of hardwoods is presented in two main parts. The macroscopic part, containing numerous color photographs of end surfaces, on 65 pages, shows 1284 species of 146 alphabetically ordered families. This part is of particular help for the identification of species from the temperate zones of Europe, the United States of America and of Australia and Papua-Neuguinea, the latter belonging to the socalled "Dadswell-Collection". A few of them are difficult to identify because of a certain lack of contrast. The microscopic part compraises 1604 species, shown in black and white, in transverse and tangetial sections (magnification 25 ×), as well as in radial sections (magnification 100 ×). Also here, the families are given in alphabetical order. In some cases, the characteristics of identification, particularly of the radial sections are rendered somewhat difficult. This hardwood atlas is a great enrichment for all macro- and microscopic collections for species identification. It should stimulate further efforts to work out other wood species collections in other geographic regions of the world. R. Wagenführ

Janssen, J. J. A.: Mechanical properties of bamboo. 148 pp.; illustrated. Dordrecht, Boston, London 1991: Kluwer Academic Publ. ISBN 0-7923-1260-0. Hardcover. Dfl. 95.00; £ 32.50
Bamboo plays an important role as a material for numerous purposes in many countries, especially in Asia. Its growing appreciation has led to intensive research activities to increase the knowledge about its biology, management, properties and utilization. The author is engaged in the use of bamboo as a building material. From his collected publications about 90 papers were selected for an annotated bibliography. They are grouped under 11 main headings, often with only very few titles included, such as for growth (3), anatomy (4), moisture content (3), chemistry (3), elasticity (1), bending (13), compression (19), torsion (1). Mostly only the title, few comments and a table is presented for papers, which are not always representative. Thus, the information given does not compete with other sources, like the CAB Bamboo Bibliography or the Bamboo Abstracts by the Bamboo Information Center, Beijing, available at a much lower price.
W. Liese

Lewin, M.; Goldstein, I. S. (Eds.): Wood structure and composition. xii/488 p. Numerous Figures and Tables. New York 1991: Marcel Dekker Inc. ISBN 0-8247-8233-X. $ 189.75
This book is volume 11 of the renowned "International Fiber Science and Technology Series", and it is promising to thoroughly cover the current knowledge of wood structure and composition by examining their sources, anatomy, chemical properties and interactions, isolation, processing, application, and moral. 16 North American authors have contributed to the book which is divided into 10 chapters: Overview of the chemical composition of wood (I. S. Goldstein); Wood: Formation and morphology (R. J. Thomas); Wood analysis (D. B. Easty and N. S. Thompson); Cellulose (G. D. McGinnis and F. Shafizadeh); Lignins: Occurrence in woody tissues, Isolation, Reactions, and structure (C.-L. Chen); Lignin biosynthesis (R. Sederoff and H.-M. Chang); Hemicelluloses (R. L. Whistler and C.-C. Chen); Extraneous materials from wood (E. Zavarin and L. Cool); Bark (M. L. Laver); The composite nature of wood (A.P. Schniewind and H. Berndt). – A great amount of material has been gathered and described in these chapters; however, it varies in quality. But the point here is not to look for faults (e.g. formula of arabinogalactan) or one-sideness (e.g. illustrating just the obsolete chain folding

model of cellulose). There are, certainly, excellent chapters on wood analysis, lignin, bark, and physics of the cell wall substance. The reviewer's main reservation concerns the fact that most of the source material is very outdated. Only in some chapters may one find a few references more recent than 1980. – The book may find its way into libraries and offer students a lot of material handily presented. But it does not fulfil its promise of reflecting the current state of the art in the wide field of wood science. M. Stoll