

## Book Reviews

### *FOREST PRODUCTS AND WOOD SCIENCE*

John H. Haygreen and Jim L. Bowyer. Publishers: The Iowa State University Press/Ames. Price: \$24.95.

This book was written primarily for students who intend to pursue careers in wood science or forest products and to provide an appropriate introduction to wood products for students of materials science.

Part 1 introduces the nature of wood and the trees that produce them. Growth processes are presented only conceptually, but have sufficient clarity for student appreciation. The structural features of wood are well covered, but no attempt is made at wood identification.

In Part 2 the physical characteristics of wood are dealt with. Wood density is considered to be most important. The measurement of wood density and its relationship to other physical properties is emphasised. A unique feature of the book appearing in this is the discussion of the influence of forest management and silvicultural practices upon wood properties.

Part 3 provides an outline of the manufacturing processes involved in producing major wood products. the emphasis is mainly upon the quality of the wood raw material and the yield and quality of the products.

The last section of the book provides a resume of some of the changes in use of the world's wood resources. The use of wood for energy, technological development, and fuel is discussed and evaluated. The appendices give useful data on wood in relation to moisture, decay resistance and mechanical properties.

The book is written in a lucid style which makes it eminently suitable as a reference text for students. It is extremely well illustrated throughout and this makes much of the text self-explanatory. However, in some sections this is over-simplified and may be of limited value to students who already have some knowledge of wood structure, e.g. the section on the structure of softwoods makes only a fleeting reference to crossfield pitting although these structures are frequently critical for wood identification. Similarly, pulping processes are dealt with in a fairly superficial manner and Part 3 in general may be of limited value to forestry students. For students in Ireland the data supplied in the chapter on Wood for Energy have little relevance, but the values and ideas presented are not without substance.

As a standard reference text for students in the fields mentioned and those with no previous knowledge of wood science this book presents a wealth of technical information about wood and its products.

For those students who are anxious to avoid detailed descriptions and technical jargon, the book provides an excellent introduction to forest products and wood science. Those who wish to extend their knowledge of the subject material will find a comprehensive list of references to aid them at the end of each chapter.