

The material in the book is treated under two main headings: "Extramural" and "Intramural".

Under the first heading, Stakman gives a survey of air-transport problems. Wodehouse provides some fine and useful plates of pollen forms and Durham treats of mould spores as allergens. Proctor and Parker give a summary of the work, mainly by the former, on high altitude collecting. ZoBell gives some interesting new information on bacteria in marine air, emphasizing the overlooked condition of halophily prevalent among them and incidentally putting an end to the myth of the sterility of oceanic air masses, on which the belief in the terrigenous origin of all aeroplankton largely rests.

Keitt and Christensen give good reviews of local and distant transportation of plant pathogens. Lastly, Glick's account of the admirable aeroplane studies of insect distribution, under the care of the U.S. Department of Agriculture, whet the appetite for more facts about this infant science, which may become of such immense significance in the aerial age before us.

Under the heading of "Intramural", Wells and Wells introduce the papers included as laying the foundation of a general theory of air-borne infection. The series is comprehensively planned. It covers first the physics of microscopic particles in air suspension (Hatch, Jennison and Phelps). Secondly, there are fifteen papers on air disinfection, treating particularly of ultra-violet radiation in many aspects. Thirdly, there are six papers on the environmental control of air infection both for adults and infants and four papers of observations on the actual passage of air-borne infectants. Finally, there are two papers on the use of aerosol mists as disinfectants. The relative simplicity and effectiveness of this method, especially with propylene glycol, entitles it to greater prominence.

Incidentally, British readers will be interested in the revelation that very large stocks of cellulose acetate masks have been prepared in Great Britain for issue as safeguards in the event of serious shelter epidemics appearing. Happily they have not been needed.

Notwithstanding the regrets which have been expressed that a more all-round treatment of the subject has not been possible, the reviewer would pay high tribute to the workers concerned in producing this attractive and important book. Such an amount of modern work has here been brought together and reviewed by first-hand authorities that it is quite indispensable to all who are interested in the microbiology of the atmosphere. We may well end by submerging criticism in admiration.

R. C. McLEAN.

## AMERICAN TIMBERS

### Commercial Timbers of the United States

Their Structure, Identification, Properties and Uses. Published formerly under the title "Identification of the Commercial Timbers of the United States". By Prof. H. P. Brown and Prof. A. J. Panshin. (American Forestry Series.) Pp. xxi+554. (New York and London: McGraw-Hill Book Co., Inc., 1940.) 35s.

A MORE suitable title for this book than that selected by the authors would have been "A Treatise on Wood Growth and Structure". The

reader will find that out of 554 pages only 154 can be said to be informative on the subject of commercial timbers of the United States: these 154 pages include seventy-five kinds of woods, on which the information is limited and generally highly technical. The uses of the timbers named are drawn only from information within the United States, and a glance at the bibliography displays perhaps a somewhat insufficient research.

A treatise on the commercial timbers of the United States should not neglect the commercial aspect. The highly organized methods employed by American commercial men have played an important part in the export trade to every part of the world. The total import into the United Kingdom alone for the year 1938 amounted to no less than £3,672,747, and of oak alone to 5,841,395 feet cube, valued at £1,038,839—by no means a negligible matter.

American timbers will be met with all over the globe. The traveller in India and Burma may find himself in a railway carriage lined with American timber, and even in the most remote districts of Burma housewives may be seen using domestic articles made from American woods. None of these interests, however, is mentioned in the work before us. From a commercial point of view, therefore, the reader is left unsatisfied.

There seems to be a certain lack of clarity as to the aim of the book. In the introduction Mr. Walter Mulford says: "The American Forestry Series is intended for the college student, the practising forester, and men in the forest industries", and in a somewhat confusing manner he informs the public that "Forestry is a profession", modified later by a further statement that it "is not an exact profession", and again that "Forestry is not a science", summing up that "The American Forestry Series is to be professional in character, with as much sound science as it is possible to include". The distinction between a "profession" and an "exact profession" is difficult to understand, as also what is meant by "sound science". The claim that "Forestry is not a science" might be open to dispute. Nature has provided a wealth of forests for the enjoyment and use of mankind, and for the necessary health and safeguard of climate and soil, but this is so far as the natural forest carries us. It is clear that the science of controlling and perfecting the man-made forest has become a necessity as a result of the demands of civilization; but while the problem is interesting, the subject is beyond the scope of the present work.

Attention having been directed to certain matters in which the book fails to supply information that might well be expected, it is pleasant to be able to commend many merits which it does undoubtedly possess.

When we come to the subject of wood growth and structure, quality and texture, the origin of wood, its gross features, its woody plant cells, minute structure, and miscellaneous information, the authors are at home, and have contributed an excellent treatise for the instruction of the forest student and the ordinary reader. Two hundred and ninety pages are devoted to these subjects, presented in clear and concise terms, and fully illustrated by two hundred and twenty photomicrographs and forty-eight plates, which include representations of the timbers as they are severally constructed and as they appear when adapted to domestic use.

ALEXANDER L. HOWARD.