

encountered if botanical terms and families of trees are to become an integral question in relation to timber.

These remarks, in any event, although suggested by the book, do not in any sense affect its usefulness, as the method adopted enables the reader to make easy reference. The whole work is supplemented by an excellent index, covering no fewer than fifty-two pages—by itself a remarkable achievement, which must have required great diligence and patience.

There are thirty-six well-chosen illustrations, of unusual interest, and twenty-two pages of photomicrographs, as well as exhaustive "Lists of families classified with reference to special properties and uses of their bark, leaves and timber".

In addition, the book contains illustrated maps, whereon are noted the areas whence the various woods are obtainable, with particular reference to those to which individual species are limited; information, both for the present and the future, of inestimable value.

This book, without which no arboricultural library would be complete, embraces all the interests of forestry and timber, and provides a fund of information never before available, surpassing those valuable contributions on this subject which we already possessed, and even the work which Prof. Record himself and his associates have formerly completed.

ALEXANDER L. HOWARD.

PLACE-NAMES OF CAMBRIDGE-SHIRE

The Place-Names of Cambridgeshire and the Isle of Ely

By P. H. Reaney. (English Place-Name Society, Vol. 19.) Pp. lxi+396. (Cambridge: At the University Press, 1943.) 23s. 6d. net.

A LOT of water has flowed even under the bridges of the Cam since Prof. Skeat published his monumental work on the place-names of Cambridgeshire, and much new information, archaeological and otherwise, has accumulated since that date. It has been shown that the area was peopled by Anglo-Saxon folk from a very early date—before the end of the fifth century—and the researches of such investigators as Sir Cyril Fox, T. C. Lethbridge and others have thrown a flood of light on these early migrants, their origins, movements and modes of life. The place-names of the county, in spite of the absence of *ingo's* endings, confirm the existence of these early settlements. The occurrence of personal names, ancient and rare words and primitive forms of compound make this clear. Celtic influence, on the contrary, seems to have been slight, so far as the place-names are concerned, though the river-name *Grante* and some other stream names do appear in some compounds. Scandinavian influence, though not strong, is noticeable, though only two villages—Toft and Bourn—are of pure Scandinavian origin. Again, Anglo-Norman influence was also apparently not strong.

The author will scarcely expect his work to be used as armchair reading; yet the fact is that anyone who knows the county finds himself looking up the name of village after village for the interest of what he will learn. It is dreadful to find by how narrow a margin Grantchester—which should be spelt *Granteseta*, meaning the settlers on the *Granta*—escaped being *Grandchester*, a horrid hybrid mean-

ing the big Roman camp! Westley Waterless actually means water clearings to the west (of Dullingham); waterless being a corruption of waterlees or water meadows.

After an all too short introduction and some necessary fore pages, an account is given of the river-names, followed by those of the famous dykes. There then comes an account of Cambridge and its immediate environs, including the origin of the names of many of the streets. The rest of the book is devoted to the villages of the county arranged by hundreds, brief mention being given in each case of some names in the parish of fields, woods, houses, etc., which are of interest from an etymological point of view. These references, in the nature of the case, cannot be complete; space would not permit, and many people with local knowledge will necessarily look in vain for the origin of some familiar but not understood field-name. An index and three maps in a folder complete the volume.

This is certainly a work to possess, and the author is to be congratulated on its production. A small point struck me as interesting. How many inhabitants of the south-west part of the county remember that the villages of Great and Little Chishall and Heydon were transferred to Cambridgeshire from Essex so late as 1895? I can only testify that to-day the emotions of Heydon are strongly Cambridgeshirewards, with indeed some slight antipathy to Elmdon, the nearest place in their former county of Essex!

M. C. BURKITT.

X-RAYS IN INDUSTRY

X-Rays in Research and Industry

By Dr. H. Hirst. Pp. 96. (Melbourne: Tait Publishing Co. Pty., Ltd., 1942.) Cloth, 7s. 6d.; paper, 5s.

IT seems to be the fate of the physicist to provide the tools for others to finish off the job. X-ray physics has provided a very practical tool for studying the inner structure of materials. Inevitably it has become the concern of the chemist, metallurgist and engineer. This, however, is a good omen, and for further effective application of X-ray work one looks forward to increasing contributions from people interested in the structure of materials from points of view other than that of the pure physicist. This book by Dr. Hirst, who surveys the field for the metallurgist, is a welcome sign.

Dr. Hirst considers both X-ray diffraction and X-ray radiography, and sets himself two tasks: to point out the type of application in which the X-rays might profitably be employed; and to give such guidance in technique that the metallurgist might hope to tackle the X-ray work himself. He has achieved both aims admirably, and made a useful contribution to a literature which has not catered greatly for the practical worker. His presentation is brief, but to the point.

In X-ray diffraction, the author has chosen the applications to study of alloy systems and stages in precipitation, chemical testing, temperature effects, grain size, and the structural changes accompanying plastic deformation. These applications are well known and have been described before, but scarcely with such emphasis on practical procedures. This makes the book useful to the newcomer, who is given tangible directions to go on, and interesting to the older hand who can compare notes and occasionally criticize. One criticism which might be allowed is