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Department of Scientific and Industrial
Research

FOREST PRODUCTS RESEARCH
BULLETIN NO. 26

An Atlas of
End-Grain
Photomicrographs
for the Identification
of Hardwoods

HER MAJESTY'S STATIONERY OFFICE

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH

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**AN ATLAS OF
END-GRAIN PHOTOMICROGRAPHS
FOR THE IDENTIFICATION
OF HARDWOODS**

LONDON: HER MAJESTY'S STATIONERY OFFICE

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PREFATORY NOTE

This Bulletin has been prepared as a further contribution towards meeting the demand for means of identifying commercial timbers.

It was realized that the previous publication on the subject, Forest Products Research Bulletin No. 25, *Identification of Hardwoods : A Lens Key*, although giving the essential data needed for identification, might not prove entirely satisfactory for those users who were not in a position to verify the results obtained from the key by comparing the samples in question with authentic specimens or photomicrographs. It is hoped that the present publication will go a long way towards overcoming this difficulty.

Although the decision to prepare an atlas of this kind was taken before the preparation of Bulletin No. 25 was completed it was deemed advisable to issue this supplementary publication separately, partly to avoid delay, and partly to limit the cost of the key for those to whom the atlas itself is not essential.

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AN ATLAS OF END-GRAIN PHOTOMICROGRAPHS FOR THE IDENTIFICATION OF HARDWOODS

ABSTRACT

THIS Bulletin comprises 396 photomicrographs at $\times 10$ magnification showing the structure of the timbers dealt with in *Bulletin No. 25, 'Identification of Hardwoods: A Lens Key,'* and is primarily intended for use in conjunction with that key. The introductory notes include lists of timbers chosen to illustrate the various features used in identification. An index giving botanical and common names of the timbers is appended.

INTRODUCTION

The collection of photomicrographs included in the present publication covers practically all the kinds of hardwood on the United Kingdom market and will generally enable anyone acquainted with the diagnostic anatomical features of timber to carry out identification by direct comparison between the structure of the sample to be identified and the photographs. The atlas is primarily intended for use in conjunction with *Forest Products Research Bulletin No. 25, 'Identification of Hardwoods: A Lens Key,'* which provides a systematic scheme for identification based on the use of marginally perforated cards. It is advisable to verify identifications made by means of this, or any other key, by comparing the sample in question with an authentic specimen or, failing this, with a photomicrograph or detailed anatomical description. For anyone who has no access to an adequate collection of named timber specimens the atlas provides a reasonable substitute. Apart from its use in ordinary identification the atlas will also be found useful for checking whether or not a timber is what it is reputed to be.

In whichever of these ways the atlas is employed it will be necessary to prepare a *cleanly* cut end-grain surface of the sample in question for examination. A razor or safety razor blade is better than an ordinary knife for this purpose. In selecting a portion of the sample to prepare in this way it should be noted that wood within an inch or two of the pith often differs appreciably in structure from more 'adult' wood, particularly in regard to the size and number of pores and rays, and should therefore be avoided, if possible.

The end-grain structure shown in the photomicrographs can be regarded as fairly representative of the adult wood of the species concerned in so far as this can be reproduced photographically. A certain amount of variation in structure may occur within the adult wood of each species but it was impracticable to include sufficient photomicrographs to illustrate the extent of this variation; if necessary, some idea of this may be gained by studying the anatomical descriptions given in *Bulletin No. 25*.

All the photomicrographs included are at a linear magnification of ten times. This is substantially higher than that of a hand lens rated at $\times 10$