

Book Reviews

SOIL RESOURCE SURVEYS FOR FORESTRY — SOIL, TERRAIN AND SITE MAPPING IN BOREAL AND TEMPERATE FORESTS

K. W. G. Valentine, Monographs on Soil and Resources Survey No. 10. Oxford Science Publications, Oxford University Press, Walton Street, Oxford OX2, 6DP, England.

Several factors have combined to make the current generation of foresters pay more attention to the soils on which trees grow than perhaps their predecessors did. At least this is the position in Western Europe and Northern America where the effects of exploitive forestry practices, common centuries ago, are now being redressed by intensive silviculture. However, the situation in the tropics is less sanguine due to the well-known deforestation practices being conducted there, with inevitable detrimental consequences to the soils. Irish foresters have come to recognise the importance of the soil to the continued well-being of the forest, mainly through experience of destructive effects of modern harvesting machines on soils and also through experience of the ravages of windthrow on particular soils.

Surveys of forest land have not always been regarded as worthwhile and some still question their value. However, the author of this book neatly argues in their favour by pointing out that although the source of wood production was generally regarded as the trees it is now more properly perceived as one stage back — in the soil. Also acceptable are his reasons why forest soil-site surveys are peculiarly different to other (agricultural mainly) soil surveys. For instance particular properties need to be emphasised in forest surveys — as an example trees respond more to water and rooting depth and less to immediate nutrient supply than do agricultural crops.

This book contains the minutest details of how to make a forest soil survey. These chapters I fear will interest only those who have to conduct surveys themselves. The specialist therefore will relish those chapters dealing with: (i) the stages of a survey and how to produce a soil map, (ii) the way to plan a survey, (iii) the collection and recording of information in the field, and the equipment required, (iv) the evaluation of information to express the potential of soil and land for forestry, (v) the presentation of information to the forester in the form of soil descriptions, maps and evaluations, and (vi) the use of computers in forest soil surveys.

The general reader will find most value in the early chapters. In these the author describes the nature, management and planning of forests, all the time impressing on the reader the importance and relevance of soil properties to the various forestry practices employed, in particular how soils influence tree growth and harvesting method. Equally impressive and informative is the presentation of the many kinds of classification systems applied to forest lands, especially the explanation of the differences between them and their application. For these chapters alone I would recommend the book to those who still remain unconvinced of the primary importance of the soil resource in determining the potential of the forest. Maybe then they will understand why some of us peer into soil pits, and even dig them!

Dick McCarthy.