FOREST TREES AND FOREST SCENERY

BY
G. FREDERICK SCHWARZ

Table of Contents

FOREST TREES AND FOREST SCENERY

A River Scene in Florida

PREFACE

In the ensuing pages I have made simple inquiries into the sources of beauty and attractiveness in American forest trees and sylvan scenery. In the concluding chapter, by way of contrast, I have given a short account of the esthetic effects of the artificial forests of Europe. The system which shaped these forests and gave them their present appearance should, however, possess more than a comparative interest for Americans. It has, in fact, a further connection, though a slight one, with the subject, and therefore requires a few words of explanation.

It is well known that in many parts of Europe the forests have long been subjected to a systematic treatment known as forestry. The term, at first strange, is gradually becoming quite familiar to us Americans, for the application of this comparatively new science has already begun in many sections of our country. The principles of European forestry will naturally undergo many modifications in their new environment, and the vastness of our forest areas, as well as the long life that naturally belongs to trees, will impose a very gradual progress. Nevertheless, the movement for a rational use of our forests is rapidly advancing and is certain in time to find a very wide application.

Although the aims of forestry are utilitarian and not artistic, the technical character of the operations which it involves impresses upon natural forest scenery a changed aspect. Eventually the work performed upon our forests will be manifested in a new outward appearance, a change that cannot but be preferable to the scenes ordinarily presented by our cut-over and abandoned timberlands,

and one that will be appreciated not only by forest lovers in general, but also by those who are engaged in the lumber industry itself, who are often forced through competition and prevailing methods to leave a desolate picture behind.

In a word, forestry interests us here because, having already obtained a foothold in our country, through it forest beauty stands on the threshold of a new relationship. This relationship, which is to grow more intimate with time, appears to justify a certain discrimination in the choice of the trees and forests herein described, and an occasional reference to some of the less technical matters of forestry that may incidentally suggest themselves as being of some interest to the general reader. To have attempted more than this would have detracted from the unity of the subject. While the reader may, therefore, find in these pages some facts that are new to him, he will notice that these facts have been made subordinate to the leading object of the book, an appreciation of the esthetic value of some of our commonest forest trees.

The illustrations have been derived from various sources. The plates facing pages 38, 58, 62, 64, 66, 116, 120, 130, are reproductions from original photographs that were furnished through the courtesy of the Bureau of Forestry, United States Department of Agriculture. My grateful acknowledgments are due Mr. Overton W. Price, Assistant Chief of the Bureau of Forestry, for photographs chosen out of his collection to supply the plates facing pages 69, 148, 158. The remaining illustrations have been reproduced from photographs in my own collection.

Notes of reference, which are indicated by superior figures in the text, and an index to the names of the trees that have been described or specially referred to in these pages, will be found at

the close of the book. The index has been compiled from a well-known bulletin of the Bureau of Forestry, United States Department of Agriculture, entitled “Check List of the Forest Trees of the United States.” Courteous acknowledgment is here made to the author, Mr. George B. Sudworth, and to the Division of Publications, of the same Department, for kind permission to make extracts from the bulletin referred to.

CONTENTS

FOREST TREES AND FOREST SCENERY

"One impulse from a vernal wood
May teach you more of man,
Of moral evil and of good,
Than all the sages can."
WORDSWORTH.

I
FOREST TREES

THE beauty of a forest is not simple in character, but is due to many separate sources. The trees contribute much; the shrubs, the rocks, the mosses, play their part; the purity of the air, the forest silence, the music of wind in the trees—these and other influences combine to produce woodland beauty and charm. A first consideration, however, should be to know the beauty that is revealed by the trees themselves.

Here it will be wise to make a selection: to choose out of the great variety of our forest flora those trees that most deserve our attention. Many of our forest trees have naturally a restricted range; others are narrowing or widening their range through human interference; still others have already established their right to a preëminence among the trees of the future, because, possessing to an unusual degree the qualities that will make them amenable to the new and improved methods of treatment known as "forestry," they are certain to receive special care and attention; while those that are not so fortunate will be left to fight their own battles, or may even be exterminated to make room for the more useful kinds. Among all these the rarest are not necessarily the most beautiful. Those that are commonest and most useful are often distinguished for qualities that please the eye or appeal directly to the mind.

In accordance with the ideas already expressed in the Preface, the considerations that will determine what trees shall be described are as follows: first, trees of beauty; next, those that are common and

familiar; finally, those that are important both for the present and the future because they are useful and have an extended geographical distribution.

The trees selected for description will here be divided into the two conventional groups of broadleaf species and conifers, beginning with the former.

THE BROADLEAF TREES

In the "Landscape Gardening" of Downing we read concerning the oak,—

"When we consider its great and surpassing utility and beauty, we are fully disposed to concede it the first rank among the denizens of the forest. Springing up with a noble trunk, and stretching out its broad limbs over the soil,

> 'These monarchs of the wood,
> Dark, gnarled, centennial oaks,'

seem proudly to bid defiance to time; and while generations of man appear and disappear, they withstand the storms of a thousand winters, and seem only to grow more venerable and majestic."

It would be difficult to say whether Downing had any particular species of oak in mind when he wrote these words. The common white oak and the several species of red and black oak possess in an eminent degree the grandeur and strength which he describes and for which we commonly admire the tree.

Of all the oaks[1] the white oak is the most important. This tree will impress us differently as we see it in the open field or in the dense forest. Where it stands by itself in the full enjoyment of light, it has a round-topped, dome-shaped crown, and is massive and well poised in all its parts. Quite as often, however, we shall see it gathered into little groups of three or four on the greensward of some gently sloping hill, where it has a graceful way of keeping company. The groups are full of expression, the effect is diversified from tree to tree, yet harmonious in the whole. In the denser forest the white oak often reaches noble proportions and assumes its most individual expression. There it mounts proudly upward, contending in height at wide intervals with sugar maples and tulip trees, its common associates in the forest. Its lofty crown may be seen at a distance, lifted conspicuously above the heads of its neighbors. Stand beneath it, however, and look up at its lower branches, and there is revealed an intricacy of branchwork and a tortuosity of limb such as is unattained when it stands alone in the field. The boldness with which the white oak will sometimes throw out its limbs abruptly, and twist and writhe to the outermost twig, I have never seen quite equaled in the other oaks. The live oak, it must be admitted, is even more abrupt where the limb divides from the trunk, but it does not continue its vagaries to the end.

It is to be noted that these forms are not without a purpose and a meaning. Under difficulties and obstacles the twigs and branches have groped their way; often one part has been sacrificed for the good of another, in order that all gifts of air, and moisture, and light might be received in the fullness of their worth. Thus the entire framework of the tree becomes infused with life and meaning, almost with sense, and its character is reflected in its expression.

The observer is also impressed by the character of the foliage. The leaves are usually rather blunt and ponderous, varying a little—as, indeed, do those of several other trees —according to the nature of their environment. They clothe the tree in profusion, but do not hide the beauty of the ramification of its branches. In truth, they are not devoid of beauty themselves. It was natural for Lowell to exclaim,—

> A little of thy steadfastness,
> Rounded with leafy gracefulness,
> Old oak, give me.

While the leaves of the white oak do not deflect and curve as much in their growth as those of some of the more graceful and elegant trees, they nevertheless fall into natural and pleasing groups, unfolding a pretty variation as they work out their patient spiral ascent, leaf after leaf, round the stemlet; showing a changefulness in the sizes of the several leaves, and a choice in the spacing. In the first weeks of leafing-time there is to be added to these features the effects derived from transitions of color in the leaves. For the very young leaves are not green, but of a deep rose or dusky gray. They are velvety in texture, and lie nestling within the groups of the larger green leaves that have preceded them. Just as it was said a little while ago that there was expressiveness throughout the branches, it may now be said that there is a fitness of the foliage for all parts of the tree.

Foliage of the White Oak

Foliage of the White Oak

In winter, however, the beauty of the oak's foliage is gone. The dry leaves still hang on the boughs, sometimes even until spring, but they look disheveled and dreary. Still, they are not without some

esthetic value, though it be through the sense of hearing instead of sight. Thoreau says,—

"The dry rustle of the withered oak-leaves is the voice of the wood in winter. It sounds like the roar of the sea, and is inspirating like that, suggesting how all the land is seacoast to the aërial ocean."

Deep and glorious, too, is the light that rests in the oak woods on midsummer days. It filters, softened and subdued, through the wealth of foliage, and wraps us in a mellow radiance. Its purity and calm depth lift the senses to a higher level. Most limpid is the light in a misty shower, when the sun is low and the level rays break through the moist leaves and dampened air, while we stand within and see everything bathed in a golden luster.

Our common chestnut is of less economic value than the oak, but one suggests the other, for the two are often found together and are similar in size and habit. The chestnut is, in truth, one of our finest deciduous trees. It has a luxuriance of healthy, dark-green foliage, and is happy-looking in its abundance of yellow-tasseled blossoms. It is even more beautiful in August, when the young burs mingle their even tinge of brown with the fresh green of the glossy leaves. In old age it has the same firmness that is so noticeable in the oak, and seems to be just as regardless of the winds and gales.

The character of the leaf and the manner in which the branches of a tree divide and ramify have so much to do with certain beautiful effects, that I shall make some remarks on these features in two of our maples. The sugar or hard maple is the most useful member of this genus, and may advantageously be compared with the red maple, which is perhaps more beautiful.

It is of great advantage to both of these trees that the sweep of their branches, which is carried out in ample, undulating lines, is in perfect harmony with the elegance of their foliage. In the sugar maple the latter spreads over the boughs in soft and pleasing contours. The leaves are a trifle larger than those of the red maple, and their edges are wavy or flowing, while their surfaces are slightly undulating and have less luster than those of the other tree. They are thus well fitted to receive a flood of light without being in danger of presenting a clotted appearance. The petioles, or little leaf-stems, assume a more horizontal position than they do in the red maple, and the twigs are usually shorter, which allows a denser richness in the foliage, which every breeze plays upon and ruffles as it passes by.

Spray of the Sugar Maple

Spray of the Red Maple

The red maple has a more airy look. This is due partly to the character of the leaf, but primarily to that of the branchwork. The main branches spread out in easy, flowing lines, much as they do in the sugar maple; but they assume an ampler range, and the last divisions, the twigs, take on decided curves, rising to right and left. On these the leaves multiply, each leaf poised lightly upon its curved petiole. As compared with the leaf of its congener, that of the red maple is firmer and a shade lighter, especially underneath. It is also more agile in the wind. The effect of the whole is more that of a shower of foliage than of pillowed masses. The curving lines, the elastic spring of every part, and a kind of freedom among