

**COMMON FOREST TREES  
OF NORTH CAROLINA:  
HOW TO KNOW THEM. A  
POCKET MANUAL**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9781760570019

Common forest trees of North Carolina: how to know them. A pocket manual by J. S. Holmes

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Edited by Trieste Publishing Pty Ltd.  
Cover @ 2017

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**J. S. HOLMES**

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COMMON  
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HOW TO KNOW THEM



*A POCKET MANUAL*

Prepared by  
J. S. Holmes, State Forester

NORTH CAROLINA GEOLOGICAL AND  
ECONOMIC SURVEY

With the Collaboration of the State Foresters of  
Tennessee, Virginia and Maryland, and  
the help and advice of the

FOREST SERVICE  
U. S. Department of Agriculture



CHAPEL HILL, N. C.

1923

## FOREST TREES



### FOREWORD

This handbook has been planned and published by the North Carolina Geological and Economic Survey in order that our people may have a convenient book of reference, by the help of which they may learn to recognize the trees common to their locality. Should the use of this handbook lead to the desire for further knowledge, the State Forester will gladly direct inquirers to literature on any phase of forestry.

Bulletin 6 of the Survey, "The Timber Trees of North Carolina," by Gifford Pinchot and W. W. Ashe, has been out of print for many years, and while the present small book in no way takes its place, it does in part supply a demand for information concerning our trees which has each year become more insistent. The Survey hopes sometime in the future to prepare a volume on our trees more in keeping with the importance of the subject. Until that time, it is hoped that this manual will have the widest possible circulation.

The text has been prepared by the State Forester in collaboration with the State Foresters of Tennessee, Virginia and Maryland, each of whom is adapting it to use in his own State and publishing it simultaneously. The style of the book and many of the descriptions have been based on similar manuals published by Massachusetts, Maine and Vermont. The cuts, as will be noted, have been secured from several sources. Those of the foliage and fruit of many of the hardwoods and all of the hardwood twigs are from original drawings by Mrs. A. E. Hoyle, made especially for this publication, and furnished free by the U. S. Forest Service. The other plates have been purchased or borrowed. Special acknowledgment is due to Professor C. S. Sargent for figures illustrating the conifers (pines, cedars, etc.) which are from his "Manual of Forest Trees of North America," here used by permission of and by special arrangement with Houghton-Mifflin Com-

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pany; and to the Vermont Experiment Station for its courtesy in loaning a number of these illustrations. The valuable and unstinted aid of Mr. W. R. Mattoon, Extension Specialist, U. S. Forest Service, is hereby gratefully acknowledged. Without his initiative and guidance and that of the Forest Service, the production of this handbook at the present time would have been well-nigh impossible.

The inclusion in this book of the botanical or scientific names of the trees is thought advisable in order to avoid the confusion likely to arise from the use of the common names alone, which often vary not only in different States, but even in separate localities within the same State.

A similar confusion has also been observed in the use of the scientific names of certain trees because of the difficulty of knowing which tree the botanist had in mind when he gave it the name. Hence, the practice has arisen of attaching the initials or abbreviation of the name of the botanist who gave the plant that particular scientific name. It seems wise, therefore, to follow the usual custom and give in full these scientific names for the sake of accuracy, but the general reader is not urged to burden his memory with them.

(Trees are the largest and oldest of living creatures. They are in one way or another perhaps more closely associated with our own daily lives than is any other class of living things, yet most of us know less about them and can hardly even tell one of these friends from another.) It is hoped that this book will furnish information which will enable even the child to know our common trees at sight, and will stimulate so great an interest in the life and habits of these denizens of our forests that all North Carolinians may learn to appreciate, foster and protect the great heritage of our trees.

In using this book it should be borne in mind that nearly two-thirds of the area of our State is still

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classed as forest land; that most of this has had the greater part or all of the merchantable timber cut from it; and that through destructive lumbering, turpentineing, roving livestock and forest fires, this timber has been replacing itself very slowly or not at all.

It should also be remembered that a happy change is taking place. Landowners are cutting more carefully; cattle and hogs have been controlled in nearly all our counties; and protection from fires is being extended as rapidly as County, State and Federal funds become available. The chief thing lacking now is the interest and co-operation of the people of the towns as well as of the country in growing and protecting our trees and forests. If this little book will bring about a better understanding of trees and a greater appreciation of their aesthetic and economic value to us and those who come after, its purpose will have been accomplished.

JOSEPH HYDE PRATT, Director  
N. C. Geol. and Econ. Survey.



### A TREE.

A tree is one of nature's words, a word of peace to man;  
A word that tells of central strength from whence all things  
began;  
A word to preach tranquillity to all our restless clan.

Ah, bare must be the shadeless ways, and bleak the path  
must be,  
Of him who, having open eyes, has never learned to see,  
And so has never learned to love the beauty of a tree.

Who loves a tree, he loves the life that springs in stars and  
cloud,  
He loves the love that glids the clouds, and greens the April  
sod;  
He loves the Wide Beneficence; his soul takes hold on God.

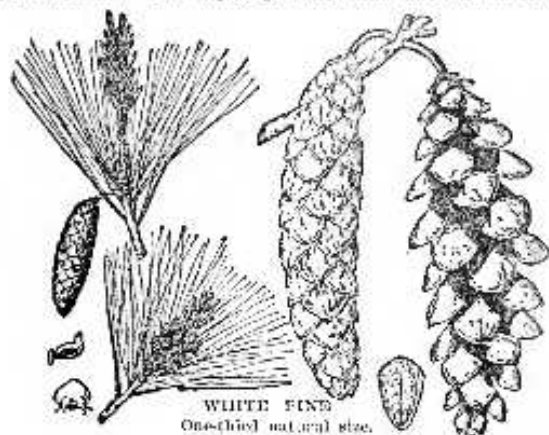
—From "Arbor and Bird Day Manual for  
North Carolina, 1915."



## FOREST TREES

### WHITE PINE (*Pinus strobus* L.)

**T**HE white pine occurs naturally throughout the mountains and extends into the adjacent region. It grows on high, dry, sandy and rocky ridges, but prefers the cooler or moister situations. Its straight stem, regular pyramidal shape and soft gray green foliage make it universally appreciated as an ornamental tree. Its rapid growth and hardness, and



the high quality of the wood make it one of the most desirable trees for forest planting.

The trunk is straight, and, when growing in the forest, clear of branches for many feet. The branches extend horizontally in whorls (i. e., arranged in a circle on the stem), marking the successive years of upward growth. The bark is thin and greenish red on young trees, but thick, deeply furrowed and grayish brown on older trees. The tree commonly attains heights of 50 to 60 feet and diameters of 1 to 2 feet, though much larger specimens are still to be found.

The leaves, or needles, are 3 to 5 inches in length, bluish green on the upper surface and whitish beneath, and occur in bundles of 5, which distinguishes it from all other eastern pines. The cone, or fruit, is 4 to 6 inches long, cylindrical, with thin, usually very gummy scales, containing small, winged seeds which require two years to mature.

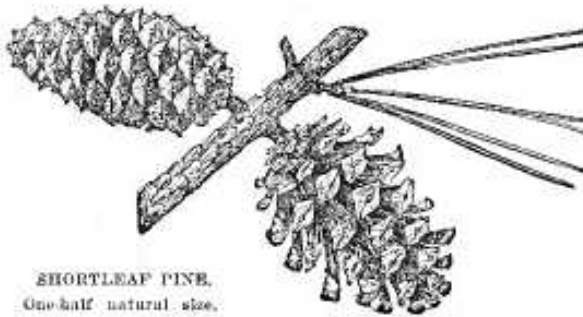
The wood is light, soft, not strong, light brown in color, often tinged with red, and easily worked. The lumber is in large demand for construction purposes, box boards, matches and many other products.

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### SHORTLEAF PINE (Rosemary Pine)

(*Pinus echinata* Mill.)

**T**HE shortleaf pine, also known as rosemary pine, yellow pine and old-field pine, is widely distributed throughout the South. It is the characteristic pine over the uplands and the lower mountain slopes, where it occurs mixed with hardwoods and in pure second-growth stands. The young tree in the open has a straight and somewhat stout stem



with slightly ascending branches. In maturity the tree has a tall, straight stem and an oval crown, reaching a height of about 100 feet and a diameter of about  $4\frac{1}{2}$  feet. The young tree, when cut or burned back, reproduces itself by sprouting from the stump.

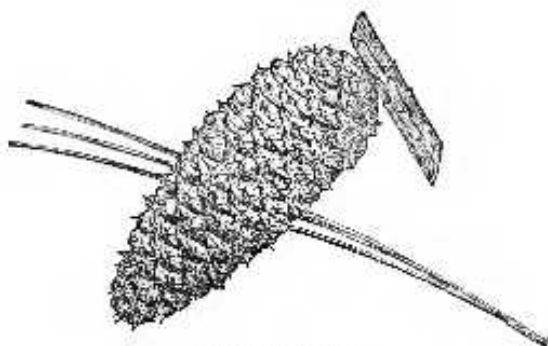
The **leaves** are in clusters of two or three, from 3 to 5 inches long, slender, flexible, and dark blue-green. The **cones**, or burrs, are the smallest of all our pines,  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches long, oblong, with small sharp prickles, generally clustered, and often holding to the twigs for 3 or 4 years. The small seeds are mottled and have a wing, which is broadest near the center. The **bark** is brownish red, broken into rectangular plates; it is thinner and lighter-colored than that of loblolly pine.

The **wood** of old trees is rather heavy and hard, of yellow-brown or orange color, fine-grained and less resinous than that of the other important southern pines. It is used largely for interior and exterior finishing, general construction, veneers, paper pulp, excelsior, cooperage, mine props, and other purposes.

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### LOBLOLLY PINE (*Pinus taeda* L.)

A fast-growing member of the yellow pine group, loblolly pine is a tree of the Coastal Plain, ranging southward from the southernmost county of Delaware. It is variously known locally as shortleaf pine, fox-tail pine and old-field pine. As the last name implies, it seeds up abandoned fields rapidly, particularly in sandy soils where the



LOBLOLLY PINE  
One-half natural size.

water is close to the surface. It is also frequent in clumps along the borders of swamps and as scattered specimens in the swamp hardwood forests.

The **bark** is dark in color and deeply furrowed, and often attains a thickness of as much as 2 inches on large-sized trees. The **leaves**, or needles, 6 to 9 inches long, are borne three in a cluster, and, in the spring, bright green clumps of them at the ends of branches give a luxuriant appearance to the tree. The **fruit** is a cone, or burr, about 3 to 5 inches long, which ripens in the autumn of the second year, and, during fall and early winter, sheds many seeds which, by their inch-long wings, are widely distributed by the wind.

The resinous **wood** is coarse-grained, with marked contrast, as in the other yellow pines, between the bands of early and late wood. The wood of second-growth trees has a wide range of uses where durability is not a requisite, such as for building material, box shooks, barrel staves, basket veneers, pulpwood, lath, mine props, piling and fuel.