

# **FOREST PLANTING**

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Forest planting by Henry Jarchow

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**HENRY JARCHOW**

**FOREST  
PLANTING**



## P R E F A C E.

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THE act of the New York State Legislature, passed on the 15th day of May, 1885—which may justly be considered as inaugurating a new era in the forestry matters of the Empire State—directs the members of the Forest Commission “to prepare tracts or circulars “of information, giving plain and concise advice for “the care of wood-lands upon private lands, and for “the starting of new plantations upon lands that “have been denuded, exhausted by cultivation, eroded “by torrents, or injured by fire, or that are sandy, “marshy, broken, sterile, or waste and unfit for other “use.” This well-meant instruction has not, to my knowledge, been carried into execution, very likely because we have no literature of any importance upon this subject—for forestry with us has not been regarded as being a branch of rural economy worthy of literary treatment, and, therefore, this field of culture has been left nearly untouched.

In this limited work I have attempted to bring within as small a compass as is consistent with clearness of statement the salient points of systematic forestry and its application to the restocking of denuded wood-lands on plains and mountains. American writers on forestry have mostly confined themselves to the treatment of forest trees as single trees, and not as masses of trees raised for the purpose of producing crops of wood or timber. They thought that forestry was an art of tree planting, destined to create, by artificial sowing and planting, new forests; and that, as we are still in the possession of many and large natural forests, the creation of new forests was to us a foreign matter. This is entirely wrong,

for if we really will *preserve* our natural or wild forests—and this is undoubtedly a much better and cheaper policy than to continue destroying them, and to later raise, at an enormous cost and loss of time, artificial forests—we have to care for our woods just as fully as the artificial forests in the European countries are treated; for in the preservation of forests it makes no difference at all whether they are originated by nature or by human art, because both are subject to the same dangers and injuries. Unless the natural forests are managed systematically, we cannot but expect that the reparation of damages done to a forest either by accidents or elementary forces, or by the natural course of tree life, will take as many centuries as it would require decades for this purpose, if we assist nature in its regenerating endeavors through the means suggested by scientific forestry.

The condition in which our forests are now, is not such as to warrant us in "pooh-poohing" the idea of looking for instruction in this matter to the European nations, and to only glance at their methods of treating forests, because we have a different form of government (see Report of the N. Y. Forest Commission, 1886, page 67), or because "the entire condition of things here differs so materially from that in the old world." (See Report of the Forest Commission, 1887, page 17.) Certainly there is a great difference between our government and that of most of the European nations, and politico-economical matters are often treated here differently from what they are there; but this does not affect the question of preserving to the succeeding generations the *natural resources* of a country necessary for the welfare of its inhabitants. If we cannot invent better methods of preserving forests than those we have practiced

up to the present time, and by which our forests will soon be doomed to total extinction, we should not only glance at, but study European systems closely, and inquire into the possibility of adopting them to some extent, if necessary. If we do that we will find that, without "*making the elaborate science and intricate machinery of European forestry available in this State*" (see Second Annual Report of the Forest Commission, Albany, 1887, page 17), the preservation of our woods can be accomplished, and at the same time a continued and even enlarged exploitation may be secured by applying some similar methods, subject of course to such changes as are rendered necessary by a diversity of climate, soil and local influences.

Although twenty years' experience in forestry in northern Germany, combined with personal observation in this country, during a like period, would seem to justify me in urging the practicability of introducing systematic forestry into the United States, I do not intend to express here a positive opinion on this point. During the course of my experience in this State, I have heard and read so much regarding the necessity of arresting the reckless use and destruction of our forests, that I thought the time had at last arrived to answer the question, "*How shall we preserve our forests?*" with a practical work. In the following pages I have endeavored to furnish sufficient hints to those who are interested in this important matter, to form a correct opinion in regard to the requirements of the culture of forests, and to apply the acquired knowledge to the proper preservation of wild or natural forests, and the restoration of wood-lands which have been denuded.

In the arrangement of the chapters, I have been led by a desire to give not only reliable information upon the subject, but also to furnish teachers in forest cul-

ture a more practical guide than they have found hitherto in American books. No claim for completeness is made, the less so as it is only a pioneer destined to invite better and more experienced men to treat more fully upon a subject, the importance of which is more and more felt every year. The enumeration and description of our common forest trees has been omitted intentionally, as these topics are treated by others with great thoroughness.

The Diagrams given in Chapter IX, Part II, and in Chapter III, Part III, explain themselves, and show the engineering work to be done in covering downs on the sea-coast with trees, and in reforesting mountains when their slopes have been cleared of natural woods, and torrents with deep ravines have been formed. The views showing the gorgeous scenery of the Adirondacks are not, perhaps, necessary to the book; but they are given to arouse those who are unaware of the beauties of our native mountain forests, and to create a spirit of enthusiasm which shall not only help to prevent further devastation of our State forests, but also may assist in restocking the wantonly denuded wood-lands.

To a good agriculturist with sufficient experience in the nature and behavior of the principal forest trees, it will not be difficult to apply the given instructions so as to accomplish the principal objects of modern forestry in the preservation of wild or natural forests.

Although the present book is written only with regard to the requirements of the State of New York, there is no reason why the instructions given in its pages should not be applicable to other localities, where the same conditions exist, if the proper allowance is made for diversity of climate, soil and topography.

THE AUTHOR.



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# FOREST PLANTING.

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## PART I.—FOREST CULTURE.

### CHAPTER I.

#### INTRODUCTORY REMARKS.

ABOUT sixty years ago, Governor DeWitt Clinton, in a message to the Legislature of New York, urged the fostering of forest planting, and declared that the reproduction of our woods was an object of primary importance. This sensible advice did not receive that legislative consideration which the great interests involved therein merited. The devastation of our forests, especially of those situated in the Adirondack region, went on as before, nay even increased from year to year, so that now the formerly densely wooded summits of those mountains are nearly denuded. We will not expatiate here on the calamities which have already befallen the country by the continual deforestation of our mountains, and which undoubtedly will in time grow to much larger dimensions; we only point to the fact that since the axe of the tanner, lumberman and miner has reached the previously well-stocked high plateaus on the Adirondacks (whence the sources of the Hudson, the Black River, some tributaries of the Mohawk and other rivers take their rise), our noble Hudson river has lost nearly five feet in its average depth. This fall in the level of the