U. S. DEPARTMENT OF AGRICULTURE. FORESTRY DIVISION. BULLETIN NO. 5, WHAT IS FORESTRY?

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649198474

U. S. Department of agriculture. Forestry division. Bulletin No. 5, What is Forestry? by B. E. Fernow

Edited by Trieste Publishing Pty Ltd.
Cover @ 2017

www.triestepublishing.com

B. E. FERNOW

U. S. DEPARTMENT OF AGRICULTURE. FORESTRY DIVISION. BULLETIN NO. 5, WHAT IS FORESTRY?

Trieste

U. S. DEPARTMENT OF AGRICULTURE.
FORESTRY DIVISION.
BULLETIN No. 5

WHAT IS FORESTRY?

BY

B. E. FERNOW,
CHIEF OF THE DIVISION OF FORESTRY.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1891.

LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
FORESTRY DIVISION,
Washington, D. C., May 20, 1891.

SIR: The unusual interest shown in the subject-matter contained in the following pages, when presented in the form of public addresses delivered by me as your representative before various bodies (notably before the State Boards of Agriculture of Kansas and Nebraska and the Chamber of Commerce of Rochester, New York), makes it appear desirable to publish the same for a larger audience.

At first sight it may be thought incongruous to present under one cover the two aspects of forestry, the reader from the treeless plains being seemingly not interested in the treatment of the forest cover in wooded country, and *vice versa*.

But while on general principles it is desirable that all citizens should understand the forestry problem as it presents itself in the different parts of the country, the knowledge which is gained in the natural forest is an aid in forest-planting, and the principles which underlie forest planting are also to some extent of influence in forest management. Hence both aspects are best presented together.

Since forest planting in the plains is still largely a matter of experiment, I have deemed it desirable to append two contributions from correspondents relating their experience, and the results of actual though limited practice in the field.

B. E. FERNOW,
Chief of Forestry Division.

HON. J. M. RUSK,
Secretary of Agriculture.

TABLE OF CONTENTS.

WHAT IS FORESTRY?

I. THE FOREST AND ITS SIGNIFICANCE.

The "forest primeval" is our most valuable inheritance. It is the ready cash of nature's bountiful provision for our future. Of all the natural resources reserved for our use it is the most directly useful, for in the forest we find ready to hand, without further exertion than the mere harvesting, the greatest variety of material applicable to the needs of man, the means to satisfy every direct want of life.

The accumulations of centuries are stored in the tree growth of the virgin forest and in the forest floor of decayed foliage. The giants which we cut down to-day are the result of nature's unaided forces, which in the Sequoias have been at work for over 2,000 years, while rarely less than 200 years' annual growth is represented in any of the trees we now utilize.

Nature has taken no account of time or space, both of which were lavishly at her command; nor did she care whether the forest was composed of the timbers most useful to man; tree growth, whatever the kind, satisfied her laws of development.

But when man begins to occupy the ground, when a growing nation has need of the soil for agricultural use and for timber, when the forest gives way to the field and meadow, it becomes necessary in time to introduce economy into the use of our inheritance, to relegate the forest to the non-agricultural soils, and to make the soil do full duty in producing only that which is useful to man.

When this stage of development has been reached in a nation, when increasing population calls for economical use of resources, when it becomes desirable to reserve the soil to that use under which it is best fitted to satisfy human wants, then a new conception of the forest arises.

The "forest primeval" then, together with the young natural growth of the better class, becomes "woodlands;" the brush lands, which result from the careless treatment of the original growth, become "waste lands," and the name of "forest" is reserved to those woodlands, which have become objects of human care, producing to the fullest capacity of the soil the most useful material.

No more convincing argument for the importance of this resource in a nation's economy can be offered than to state the value of the forest product in the United States.

The total annual product of wood material of all sorts consumed in the United States may be valued in round numbers at $1,000,000,000, representing, roughly speaking, 25,000,000,000 cubic feet of wood, or the annual increase of the wood growth of 500,000,000 acres of forest in fair condition. This value exceeds ten times the value of our gold and silver output, and three times the annual product of all our mineral and coal mines put together. It is three times the value of our wheat crop; and with all the toil and risk which our agricultural crops involve they can barely quadruple the value of this product yielded by nature for the mere harvesting.

If to the value of our total mining product be added the value of stone quarries and petroleum, and this sum be increased by the estimated value of all the steamboats, sailing vessels, canal boats, flatboats, and barges plying in American waters and belonging to citizens of the United States, it will still be less than the value of the forest product by a sum sufficient to purchase at cost of construction all the canals, buy up at par all the stock of the telegraph companies, pay their bonded debts, and construct and equip all the telephone lines. The value of the annual forest product exceeds the gross income of all the railroad and transportation companies. It would suffice to pay the indebtedness of all the States, if we leave out New York and Pennsylvania, including that of all counties, townships, school districts, and cities within those States (in 1880); and it would more than wipe out the remaining public debt of the United States. In fact, ranking manufactures of all kinds and agriculture as respectively first and second in importance, as far as production of values goes, the forest product occupies the third place. This was the case according to the census of 1880. It is claimed that since then the lumber industry has enlarged to such an extent as to make its product second, if not first in value.

The capital employed in merely milling this product, aside from that employed in the harvesting, is roughly estimated at $650,000,000, and there are more than 300,000 people occupied in the direct manufacture of forest and sawmill products alone, not to count the employment afforded by its transportation to centers of consumption and its remanufacture.

It would lead us through all phases and employments of human life were we to attempt an enumeration of the uses to which forest products are put.

Not only does the forest furnish the material for the construction of dwellings and other structures, our railroad consumption of 500,000,000 cubic feet of timber included, but countless articles of domestic economy and implements necessitate its use. Not only does it yield to two-thirds of our population the fuel to warm their houses and to prepare their