

SD 428

.A4 S5





SD 428  
.A4 S5  
Copy 1

The Public Interest Involved  
in the Cornell Forestry  
Experiment

BY  
EDWARD M. SHEPARD

NEW YORK  
FEBRUARY, 1904

SD428  
A455

CONTENTS.

---

	PAGE.
Notes upon the Public Interest Involved in this Forestry Experiment .....	5
Extracts from PRESIDENT ROOSEVELT'S Address upon Forestry and Foresters .....	20
History of Forest Engineering in the United States, by R. W. RAYMOND .....	21
Letter, Professor R. W. RAYMOND .....	25
Editorial, <i>N. Y. Evening Post</i> , Feb. 20, 1902.....	26
Editorial, <i>N. Y. Evening Post</i> , June 6, 1903.....	27

In exchange

*Rock Med. Lib*

MAY 16 1916



SJ 428  
. A4 S5

## P R E F A C E .

---

The following notes were prepared for and submitted to the Attorney-General of the State of New York in connection with a legal argument against the "application of Eric P. Swenson to bring suit to have the title to 30,000 acres of land purchased by Cornell University vested forthwith in the name of the people of the State of New York and to abrogate the contract between Cornell University and the Brooklyn Cooperage Company."

Briefly the history of the case is as follows :

By law enacted in 1898 (chap. 122) Cornell University was invited by the State to carry on an experiment for the demonstration of forestry methods on a tract of land purchased by the State and deeded for thirty years to Cornell University for that purpose. To carry out this demonstration or experiment, and also for the purpose of giving instruction in forestry, the State instituted the New York State College of Forestry under the direction of the Trustees of Cornell University.

For the maintenance of the College an annual appropriation of \$10,000 was provided. For the carrying out of the demonstration a working fund of \$30,000 was provided, and by laws 1900 (chap. 419) the income from the forest management was also to become available for conducting the experiment ; it being expected that by the sale of the harvested crop enough revenue might be secured to pay for the management, the planting of waste areas, and, where necessary, of logged areas, and for other improvements. In other words the experiment was to be conducted on business principles and to become self supporting.

Operations in the demonstration area or College Forest were begun in 1899 by surveying and districting the forest, securing the necessary data for management, establishing nurseries for the growing of plant material, and planting some waste areas. In 1900 a contract was made between Cornell University and the Brooklyn Cooperage Company for the sale of the wood that might be cut in the College Forest under forest management, and logging operations were begun.

In 1902 Mr. Eric P. Swenson, owner of a summer home adjoining the College tract, being annoyed at the proximity of the logging operations, raised the question of the constitutionality of this State enterprise before the then Attorney-General, basing his objection

upon the clause in the Constitution which forbids the cutting of trees on State lands and upon other points. The Attorney-General decided adversely to the petitioner.

In 1903, a new Attorney-General having come into office, Mr. Swenson renewed his petition, which is at present still pending. In answer to this petition to set aside the State's experiment, Mr. Shepard, on behalf of the Brooklyn Cooperage Company, prepared a brief and accompanied the legal argument with a general discussion of the propriety of the State's enterprise, which being of general public interest, is here reprinted.

Meanwhile the Governor has vetoed the appropriation which the Legislature at its last session voted for the maintenance of the College, thereby destroying the technical agency which was to conduct and supervise the forestry work. The logging operations being required under valid private contract between the University and the Cooperage Company are, however, continued without such supervision.

## THE PUBLIC INTEREST INVOLVED IN THE CORNELL FORESTRY EXPERIMENT.

---

The prohibition of the constitution prevents any cutting of timber, whether for illustrative education or for profit, or for any purposes upon the Adirondack or Catskill lands now owned by the State. The constitution requires that the lands be kept, "wild," that is to say, free from artificial cutting or planting or care. In other words, the constitution of the State forbids any practice of *forestry* in its own *forests*, and requires them to be kept as a perfectly natural park or pleasure ground. Therefore it is that, if the State,—for the sake of its enormous industrial interests involved and because of peril to those interests already commenced and certain to increase from year to year,—is to conduct a forestry experiment at its own expense, it must arrange for the experiment upon lands not owned by the State, or, at least, not yet owned by it. Upon sound public policy, it would seem to be perfectly consistent with this legal necessity that the State should do what it has done here. That is to say,—by contract procure a private owner to conduct the experiment on his own lands, and in consideration of such experiment under State auspices and of an agreement at the end of thirty years to convey the land to the State,—the State to provide such private person with the means of purchasing the lands.

It is easy to show that it has been, and still is, both the policy of this State and its interest,—either in this way or in some way equally effective,—to promote knowledge of the art of forestry.

It is, of course, obvious,—whatever inconsistent and careless expressions may be found on the part of those not expert,—that the art of forestry means the provision of a timber supply. The maintenance of the State lands on the Adirondack plateau in a "wild" condition is not forestry. It is the maintenance of a park or a pleasure ground, or what is well called by the experts a "luxury forest." It ministers to the pleasure of large numbers of citizens; and doubtless the forest, though thus kept as a wild pleasure ground, protects the head waters of the Hudson and other streams. But neither a park use nor the protection of water sources requires practice of the art of forestry. The mere maintenance of a police to prevent timber depredations and the kindling of fires, and to suppress conflagrations, is not forestry. In the consideration of this problem, it is of first consequence to realize that true forestry is the art of securing a *permanent* timber supply

of the highest practicable character from the tract of land upon which the art is practiced. This was very well put by President Roosevelt in his recent address before the Society of American Foresters, portions of which will be hereafter quoted. He then said that "the very existence of *lumbering*, of course,—and lumbering is the fourth great industry of the United States,—depends upon the success of our work as a nation in putting practical forestry into effective operation." That is to say, the end of the forestry art is the permanent promotion of the great national industry of lumbering. It is concerned with the best and most economical production of trees for industrial consumption, that is to say, to be cut for lumbering purposes. Fortunately for considerations of natural beauty and the protection of water sources, such perpetual supply of timber to be cut for lumber necessitates the maintenance of great standing forests, since the trees which are to be cut must, in order to meet the requirements of the lumbermen, have an age of at least from fifty to one hundred years. The area of the forest land covered by standing trees must always be so many times greater than the forest area cut over and not yet again covered with growth, that the latter area will be relatively unimportant.

The art of forestry is new to America. It is here understood as yet by only a few and far-seeing men. Until lately, the existing natural supply of standing timber was assumed to be inexhaustible. It seemed unnecessary, therefore, to invest either capital or labor to aid the growth of *forest* trees, although it was plain to every one that capital and labor ought to be, and might profitably be invested in the systematic planting of *fruit* trees. Of late, however, the nation has been responsibly warned that it is perilously near an exhaustion of its timber supply, and that vast national industries of the next generation are seriously involved in the peril. Timber will have to be treated as a crop; and forests will have to be cultivated as carefully as orchards or vineyards or gardens or grainfields. The one significant difference between *agriculture* and *silviculture* is the greater lapse of time in the latter between planting and harvest.

It is a wholesome general rule, under a democratic government like ours, that private capital and wisdom ought to be, and will be, supplied to meet the necessities of private industries, future as well as present. But in forestry there is an exception. The future timber supply or crop cannot safely be left to mere individual initiative, and for the plain reason that there cannot, under existing American conditions, be any immediate return to private capital or private labor from an investment in the planting of forest trees. The very many years required for the growth of a forest tree, equalling or exceeding



the lifetime of a middle-aged man,—the absence of American precedents in the forestry art,—and the relatively quick returns to capital in other and ordinary investments,—all these effectually deter private persons and private capital from undertaking the planting of forests. So it is that,—even in our democratic republic, and notwithstanding our wholesome dislike of extending governmental functions,—it will have to be conceded that the promotion of the forestry art is of necessity a public function. It is the government, and only the government, which can effectively protect the future of our national industries and of the nation itself from danger of timber famine which will not become present and practical for fifty or seventy-five or one hundred years to come.

Now, all these truths have been of late distinctly and authoritatively recognized by the State of New York, the richest and most powerful of American commonwealths and one having industries enormous and diverse. The present application invites the Attorney-General to attack this declared policy of the State, and, in so doing, to strike a blow at its permanent interests. Mr. Swenson, and the others who support this attack, insist that it is the interest of the State at large expense to maintain a forest park for the recreation of such of its citizens as are able to pay the cost of an outing in it. Nor do we criticise their view. We concede that such a park will be useful. We assert, however,—what Mr. Swenson and his associate proprietors of Adirondack camps do not see,—that it is vastly more to the interest of the State of New York and of its great industries, and of its laboring masses, to promote for the next generation, and for the generations thereafter to come, the use of its natural forest lands for a perpetual timber supply, and to preserve the State,—and to help preserve the nation,—from the very great calamity of a failure of their timber supply, by now and in time providing for its renewal. In so doing, the water sources will likewise be protected. Mr. Swenson and his neighbors do not see that the \$165,000 thus far appropriated by the State for the purpose of an example and illustration of creative or reproductive forestry and the dedication to it of a relatively small tract of land,—*the 30,000 acres of the Santa Clara tract are less than 2 per cent. of the area of the Adirondack forest,*—are but a beginning, and a small beginning, of what the State of New York should do, and inevitably will do, in this enlightened cause.

I ask the Attorney-General briefly to consider,—

*First*, the lumber necessities of the United States and of its industries.

*Second*, the limited present supply of standing timber and the approaching danger that, without artificial reproduction, the supply will be exhausted.

*Third*, the ability of the forestry art, as Cornell University has intended and begun to illustrate it upon the 30,000 acre tract in question,—to meet the danger of timber exhaustion, and to provide a perpetual and inexhaustible supply.

*Fourth*, the definite adoption by the State of New York of the public policy of promoting the forestry art,—and for the reason that, under existing American conditions, this cannot safely be left to private capital.

### 1. Lumber Requirements of the United States.

According to statistics given by the census of 1900 the yearly value of the reported output of sawmills, planing mills and timber camps was \$566,832,984 and the quantity of sawed lumber 35,084,166,000 feet B. M. Census figures for such products are always more or less defective, and are deemed by experts below the truth ; so that, for practical purposes, we may round the figures off upwards, namely to 600 million dollars and 40 billion feet. By processes of manufacture the value of this raw product is increased to at least twice the amount,<sup>\*1</sup> so that the annual forest supplies of the nation in their industrial value represent approximately 1,200 million dollars, an amount probably not less than the annual amount of all the mining products and metal manufactures of the United States. (*Table LXI, 12th Census Report, Vol. II, p. clxiv.*)

To this enormous amount, which represents only the materials used in the arts, must be added the value of fuelwood. This is not ascertained by the census of 1900 ; but, on the basis of the census statistics of 1880 when account was taken of the fuelwood consumption, it has been estimated to have amounted together with fencing material in 1890 to 450 million dollars<sup>\*2</sup> raising the value of our annual consumption of forest products to over 1,650 million dollars.

The 40 billion feet B. M. of sawed and manufactured material may be correctly estimated to represent 7 billion cubic feet of round material<sup>\*3</sup> as it grows in the woods, while the fuelwood, fencing material, etc., represent over 18 billion cubic feet. The former requires the straight, large-sized, branchless bodywood of trees, which goes into logs and which, in the natural forest, requires for development not

<sup>\*1</sup> *This statement is based upon a calculation on the basis of the Census of 1890 in "Economics of Forestry" by B. E. Fernow, p. 427.*

<sup>\*2</sup> *See "Economics of Forestry," p. 428.*

<sup>\*3</sup> *See "Outlook for the Timber Supply of the United States," Forestry Quarterly, Vol. 1, Nos. 2 and 3.*

less than one hundred and fifty to two hundred years, and in the foresters' forest from eighty to one hundred and twenty years.

Since, according to the census statistics the average stand per acre in the better class of forestland, owned by lumbermen, throughout the United States is 6,700 feet B. M., the lumber supply alone requires annually the cut of about 1,000,000 acres. Although much of the fuelwood might be cut from the same acreage, it largely is not so secured; and, assuming a stand of 40 cords per acre, the additional cut of 4,000,000 acres is required to furnish this item of our wood consumption. Altogether 5 million acres must therefore be cut annually to supply the present wants of the industries of the American people.\*<sup>3</sup>

Since, with the increase of population, the use of materials increases, it is not likely that the consumption, which now represents about 350 cubic feet per capita will soon diminish. Indeed, the census statistics show that "while the population in the last fifty years grew by 228 per cent., its lumber bill during the same period grew by 840 per cent."\*\*<sup>4</sup>

And, as has been recently shown, all industrial nations have during the last forty years increased their per capita wood consumption from year to year by from 5 to 10 per cent.\*<sup>3</sup> The census statistics show a greater increase for the United States; and it is well within reason to assume that the increase of industrial activity and the growth of civilization have had and will have the same tendency in our country as in European nations, that is to say, to bring an increase in wood consumption in spite of substitutes.

One other point of highest importance is brought out in the census statistics\*<sup>5</sup>, namely, that as far as lumber supply is concerned, the conifers (pine, spruce, hemlock, cedar, etc.) furnish three-quarters of our consumption and hence are the most important factor in the provision of lumber for American industry.

## 2. Available Timber Supplies.

The question, *What are the American resources to meet the growing American demand for wood products*, is not as readily answered as the question of consumption; for the necessary statistical data are scanty. It is only possible to make a calculation upon probabilities. This has been done in detail by Prof. Fernow in chap XI of his work on "Economics of Forestry," on p. 38. In quoting this work of Prof. Fernow we feel bound to commend it to the Attorney-General as an able and trustworthy treatise. No educated man,—certainly no educated man who has a general knowledge of industrial and agricultural

\*<sup>3</sup>See "*Economics of Forestry*," p. 480.

\*\*<sup>4</sup>See "*Economics of Forestry*," p. 482.

conditions in our country,—can read the book otherwise than with intense and sustained interest. It is by far the best and most important work on forestry which deals with American conditions.

Prof. Fernow concludes that, at best, not more than about 2,000 billion feet of timber ready for the axe and satisfactory for logs with our present standards are at hand ; and that this means a supply sufficient to meet our present requirements for fifty years, but, if the same annual rate of increase in consumption continues, not sufficient for thirty years. The census compiler, making similar calculations, comes to about the same result as to the amount of standing timber.\*<sup>3</sup>

But, as regards the coniferous supply, which, as has been stated, is the most important, furnishing three-quarters of American consumption, neither authority makes the stand more than 1,100 billion feet,\*<sup>3</sup> which, even if present requirements shall not be exceeded, must be exhausted in less than forty years.

Nor can permanent relief be had by importation from other countries. Their present product is required for their own consumption or the consumption of other countries. Canada alone is to be considered, the South American continent being almost entirely deficient in coniferous supplies.

Clearly, therefore, relief must come either, *first*, from reduction in the consumption of American industry, or, *secondly*, by reproduction of the harvest. The former relief is most difficult, perhaps impossible, to accomplish, except as it shall come about through increase in wood prices as the situation shall become fully known and realized. Such a relief would in reality be no relief, for it would consist, not in solving the difficulties and hardships of inadequate timber supply, but in bearing those hardships, as other and at present less favored nations and peoples have to bear them. The only alternative relief is to be accomplished by the introduction of industrial forestry.

### 3. Forestry Practice.

There remains, therefore, no doubt that American industry has reached that stage of development when artificial reproduction of timber must be begun. The American nation, as it grows old and densely populated, must adopt the same means of securing timber supply which other civilized nations have been forced to adopt. In other words, the American people must come to the practice of true or industrial forestry. If sooner, then better, more cheaply, and with less disaster to succeeding generations. If later, then with more disaster,—and indeed very great calamity,—to those who are to follow us.

\*<sup>3</sup>See note page 8.

It needs no argument to show that a permanent timber supply can be practically secured only by harvesting and at the same time perpetuating the forest,—preserving it as all life is preserved, namely, by reproduction. In other words, forestry is the art of producing wood crops, as agriculture is the art of producing food crops. Since, however, trees grow naturally and without the aid of man, it might be suggested that nature left to itself will reproduce the forests. So it does; but it produces not only the kinds which we desire the most, but as freely,—and to the exclusion of a large part of a true timber crop,—the kinds which are useless. So in agriculture we know that nature left to itself produces weeds as readily as useful vegetables or grain. Nor does unaided nature produce as amply as does aided nature, the quality of the timber required. Nor does unaided nature economize in time of production or attempt the maximum quantity. It is only under the guidance of man that nature will produce out of the earth the largest amount of any useful material in the shortest time. And that is, for timber, the aim of forestry.

Such reproduction of timber can be secured in various ways. The forester may direct nature so that it shall reproduce from the seeds of older trees, which for a time are left standing as mother or seed trees. Or the forester may use the simpler, surer, swifter method of harvesting the old crop entirely and replacing it by a planted crop, as the farmer does. Which method is to be employed depends, so the experts tell us, upon a large number of technical details and financial considerations, which cannot usefully be considered here. It is clear, however, even to the layman, that, where nature does not provide the kind of trees which the forester desires in the old stand, only the last method, that of artificial reproduction, can be applied.

The Federal Bureau of Forestry, for instance, is busily engaged in the making of "working plans," which are based in most cases on the theory of securing the perpetuation of the forest by natural seeding. They prescribe a diameter below which trees are not to be cut. That is a conservative method of utilizing the present supplies, since it forces the owner, as it is claimed, to leave unused portions which otherwise he would for an immediate and lesser profit use prematurely. But the motive there is financial gain to the proprietor. He is told that, by waiting, his trees will grow to better values. But from the standpoint of silviculture, that is, the art of wood cropping for the future, there is much to be said on the other side. Certainly as long as undesirable species are left on the ground to compete for soil, light and air with the new progeny, the reproduction of the valuable species can only be partially successful.

Into these expert differences of detail we cannot, of course, enter

here. The very purpose of the State in establishing a College of Forestry at Cornell and of equipping it with a considerable tract of land for its necessary experiments was to help public sentiment reach conclusions as to what must be done under American conditions. The details had to be left to experts. The Brooklyn Cooperage Company very certainly had every right to suppose that, in this matter, Cornell University would follow the advice of the most trustworthy expert to be had. It is open to no doubt whatever that Cornell's appointment of Prof. Fernow to the head of its forestry college was generally recognized as most natural and suitable. In this field he was one of the first experts,—very probably the first, in our country. Under the contract in question the Company subjected itself to the forestry regulations which might be prescribed by Cornell University.

We take it, therefore, that the Attorney-General will not go into the question whether one method or another method of practicing forestry upon the Cornell tract is the better. Very certainly the legislature and the Governor originally meant to leave the determination of such technical questions to those who were trained to the work. The very odd suggestion which seems to have been hospitably received in some public quarters, that the practice of forestry on the Cornell tract must proceed without cutting down trees is paralleled only by the famous requirement of the lady who bade her daughter learn to swim, but forbade her to "go near the water."

Before leaving this matter of the method of procedure upon the Cornell tract,—irrelevant as it clearly is to the question before the Attorney-General,—we feel bound, however, to add that there seems to be great and apparently irresistible force in Prof. Fernow's answer to the criticism upon the methods followed by Cornell. He has pointed out that this was not a forest to be maintained for money profit like the great government forests in Germany or the Biltmore estate forests in North Carolina, but that it was a "demonstration forest" upon which Cornell University was under agreement with the State to conduct operations for the instruction of its pupils in forestry. The University was required by the State, as is pointed out in the accompanying brief upon the law, to secure an immediate income from the land, possible only by cutting; and for the proceeds of such cutting the University was to render an account. The Federal Bureau of Forestry was engaged upon a demonstration of the value of the *negative* forestry policy, that is to say, of letting the forests, while standing, propagate themselves. All the more on this account Cornell University, if it were to secure the maximum educational use from its forests, had to demonstrate the value of a *positive* forest policy, that of replacing an old and very mature group of less valua-

ble species by a more valuable young group of more desirable species. The criticism that the College had not replanted the entire acreage already denuded or made ready for replanting is offered in apparent ignorance of the fact that the College was deprived of the revenue which was necessary. Its revenue received from the Cooperage Company was insufficient. The College reasonably counted upon a continuance of the State aid which had been morally promised.

#### 4. The Forest Policy of the State.

The interest of the State of New York in promoting the art of forestry goes back many years. Gov. DeWitt Clinton, in his speech to the State Senate on January 2, 1822, said (*Governors' Speeches, Ed. of 1825 at p. 190*):

“Our forests are rapidly falling before the progress of settlement; and a scarcity of wood for fuel, ship and house building and other useful purposes is already felt in the increasing prices of that indispensable article. No system of plantation for the production of trees and no system of economy for their preservation has been adopted and probably none will be until severe privations are experienced.”

In 1872, upon the urgency of Ex-Gov. Horatio Seymour, a statesman to whom this Commonwealth is under an infinite obligation for his many wise and far-seeing appeals on behalf of its permanent interests, a State Park Commission was appointed to deal with the question of constituting a State park out of the wild lands north of the Mohawk. It was not, however, until 1884 when the problem was seriously taken up by a State Commission, of which Prof. C. S. Sargent was chairman and Messrs. D. Willis James, William A. Poucher and Edward M. Shepard were the members. In 1885, after a careful examination of the Adirondack region and a prolonged consideration of the subject, that Commission recommended to the Legislature the establishment of the Forest Preserve and other legislation looking to the establishment of a State forest. The legislation drafted by this Commission was not fully enacted; but the general policy which the Commission recommended was initiated, and later developed; and, with some modification, it is to-day the policy of the State. The act of 1885 established a permanent Forest Commission.

Obviously, the first duty of the State and of its Forest Commissioners was to reduce to the utmost the reckless cutting of timber, and for this reason above all others, that there was no provision for the reproduction of the forest. It was, however, impossible for any one to perceive that—however beneficial and useful a recreation or luxury forest might be, and however serviceable to the protection of

the sources of the Hudson—the forestry problem for a great industrial community like New York was much larger, and that it was of momentous importance to the State to demonstrate that forest lands could be so treated as that, in general, the forest cover would be preserved, while, at the same time, the land would yield from generation to generation the valuable and necessary crops of trees. Therefore it was that the Forest Commission, in its report for 1890 (*p.* 90) said :

“Your Commission is fully apprised of the prejudice that exists in many quarters against felling trees of any sort and under any circumstances in the Adirondack forest. Considering the manner in which trees have been heretofore cut and the devastation that has been wrought by crude and thoughtless methods, this prejudice is not surprising ; nevertheless, it is a prejudice. ‘Woodman, spare that tree’ is poetical ; but it is not business-like when we talk of forestry. No scheme of forestry is complete that does not contemplate the preservation and cultivation of timber for the sake of wood to be used for merchantable purposes ; and the merest tyro in the school of forestry knows that mature trees for timber purposes can be cut to the pecuniary advantage of the owner and still leave the forest intact so far as regards all that is included in scientific forestry which has regard to our water supply for industrial and agricultural purposes, to our future supply of timber and to sanitary ends. \* \* \* Forestry is not opposed to having trees cut down in the proper way ; they must be cut to supply the world with timber.”

Even as early as 1884 the first Forest Commission (Messrs. Sargent, James, Poucher and Shepard) in its report to the Legislature on a proper forest policy, said (*p.* 22) :

“The manufacture of lumber cut in the Adirondack woods and the gathering of other crops of the forest is a valuable and important industry to the State. This business employs a considerable capital and a large number of men, both in the woods and in the manufacturing centres located on the banks of the principal streams flowing from the Adirondack Plateau. It is needless perhaps to point out that the life of this business is also dependent upon the life of the forests, and if these are destroyed this whole business will disappear and the capital now invested in the mills and tanneries engaged in manufacturing the products of these forests will be lost. In this connection, moreover, it must be borne in mind, that lumber becomes every year more difficult to obtain throughout the world ; that its value in future must increase in at least the same proportion as it has increased in the past quarter of a century ; and that the advantage from a purely commercial point of view, of retaining in permanent forest, regions adapted to produce forests and nothing else will be greater as the value of forest products advances under the stimulating influence of increased demand and decreased supply.

“The Adirondack region, if the experience of other countries in forest management teaches anything, could be made to maintain and increase, under a wise and comprehensive policy, the annual output of lumber without serious injury to the forests as reservoirs of moisture or as health resorts for the people ; and it is clearly in the interests of the



owners of forest property as well as for the people of this State, to encourage the adoption of any system of management which will ensure such results."

Governor Hill, in a special message asking the Legislature to appoint a Commission, said to the Legislature on 20th January, 1890 (*Public Papers, p. 52*) :

"I think the Adirondack forests, instead of being an expense and burden to the State, are capable, under the liberal policy here suggested, of paying all the expenses of their preservation as well as of yielding a handsome revenue to the State."

In its report for 1891, (*p. 27*) the Forest Commission said :

"The original idea (the establishment of the Adirondack park) called for forest preservation with reference only to protecting the head waters of our rivers and providing a future economic and perpetual timber supply. But lately the acquisition has been demanded by the public for a necessary and healthful pleasure resort, and the original movement has become largely subordinated to the latter one."

Gov. Flower, in his memorandum filed with Assembly Bill No. 1422 to establish the Adirondack Park, said (*Public Papers, 1892, p. 190*) :

"Eventually the State preserve ought to pay the expense of its maintenance from the judicious sale of timber and the leasing of small parcels of land to individuals for the establishment of small homes under proper regulations."

In his message to the Legislature of 1893 Gov. Flower said (*Public Papers, p. 38*) :

"The establishment of a great forest preserve could be made to pay all or a large part of its cost under intelligent and wise legislative supervision. Without injury, but, rather, with benefit, the State could acquire considerable revenue by granting permission to fell trees above a certain diameter on State lands."

So in Gov. Flower's address of welcome to the American Forestry Association at Albany on 16th March, 1894 (*Public Papers, p. 510*) :

"Following the ideas and suggestions which have been promulgated by the forestry experts belonging to your association, we intend that our forests shall not only protect our water supply and thereby our agricultural and commercial interests and furnish summer homes and sanitariums for our people, but they shall at the same time yield a revenue which shall pay the cost of maintenance and a handsome sum besides."

The revised Forestry Act of 1893 (*Chap. 332 of the Laws of 1893*) expressly authorizes the sale of timber. Sect. 103 is as follows :

"SALE OF TIMBER ON FOREST PRESERVE. The Forest Commissioners may sell any spruce and tamarack timber which is not less than twelve inches in diameter at a height of three feet above the ground standing in any part of the forest preserve, and poplar timber of such size as the Forest Commission may determine ; and the pro-

ceeds of such sales shall be turned over to the State Treasurer, by whom they shall be placed to the credit of the special fund established for the purchase of lands within the Adirondack park."

In its report for 1897 (*p. 343*) the Forest Commission pointed out that no contracts for the sale or cutting of timber had been made and that none had been sold or cut; and it added:

"Having obtained forest control, the æsthetic advantages which have hitherto entered into this matter to the exclusion of the *main question* of future timber supply and State revenues, will be incidentally obtained and that too without further expense or care. \* \* \* The State through the provisions of the contract could control the timber cutting and in time would come into absolute possession of the forest. The lumberman would be able to obtain his supply of logs, but under restrictions which would insure forest preservation and a future timber supply."

The Constitutional Convention of 1894, under the pressure of those who desired the maintenance of the Adirondack forest solely for park purposes, inserted in the new organic law the clause requiring that all lands then owned or thereafter to become a part of the forest preserve should be "forever kept as *wild forest lands*." In other words, the new constitution withdrew from the practice of the forestry art the lands which the State owned or should come to own on the Adirondack plateau. The American Forestry Association expressed too late its disapproval of the form of the constitutional amendment, believing as it did (*Report of the Executive Committee of the American Forestry Association for the year 1894, as printed in Report of N. Y. Forest Commission, p. 209*):

"That forest conservation and utilization of the timber crop should go hand in hand, and that while a temporary cessation of lumbering operations, until proper forestry methods could be developed, might be expedient, it was undesirable and inimical to the interests of forestry management to prevent for a term of twenty years (the supposed lapse of time before a constitutional provision could be changed) the development of such management in the State which had the best opportunity for doing so."

The adoption of the Constitution of 1894 effectually forbade for the present, at least, the use of lands which should be actually owned by the State on the Adirondack plateau, in the interest of the forestry art. The lands actually owned were, as soon as they passed into the ownership of the State, to be left "wild," without planting, without cutting and without the exercise of any of the characteristic features of the forester's art. But the amendment did not forbid the State to promote forestry art on lands, whether on the Adirondack plateau or elsewhere, which should not be owned by the State. There was no prohibition of the illustration of industrial forestry upon lands

privately owned. Nor did the constitution forbid the scientific treatment of lands for forestry purposes before the State should itself take title.

So it was that the Forest Commission, by its report for 1896 (*p. 132*), after the adoption of the constitutional amendment, made the following recommendation :

“ The scientific forestry which in other countries improves the forest and increases its yield of timber, which makes the public woodlands a source of immense perpetual revenue to the commonwealth, cannot be carried on without the use of the axe. \* \* \* But all work of this kind in our State is prohibited by law. Moreover this law was made fundamental and incorporated in the new State Constitution although every experienced professional forester protested against the false economy involved in such legislation. \* \* \* But aside from this matter of revenue and forest improvement, we believe that the Empire State with its great forest domain should take the lead in this country in developing forestry methods and sound ideas. The woodlands of New York through proper exploitation should become an object lesson for all America. *Although the Forest Preserve,—a large part of which is primitive forest in which the axe of the lumberman has never swung,—is rendered unavailable by our State Constitution for any such plan, something might be done to relieve the State from the anomalous condition in which its forestry work has been placed. In view of the proposed purchase of large areas of woodlands, a special appropriation might be made for acquiring some tract of virgin forest in the Adirondacks, to be set apart especially as an experiment station where the practicability of carrying on scientific forestry work with profit might be demonstrated.*”

In its report for the year 1898 the Forest Preserve Board said (*p. 5*);

“ The forestry movement in our State has made such progress that it is no longer necessary in a department report to dwell on the need of forest preservation or provision for a future timber supply.”

In 1898 GOV. BLACK in his annual message to the Legislature said (*Public Papers, p. 228*):

“ I am more than ever impressed with the importance of this subject and of the necessity of the State's acquiring and preserving the great forests.

“ I referred last year to their value as a health resort and as a means of renewing the decreasing supply of water. There are other considerations not less important than those then urged. They are found in the rapidly diminishing supply of timber and in the great demands made upon the spruce forests by the pulp mills of the Adirondack region. The present constitution of the State prohibits cutting timber on State lands. *This prohibition will some time be changed, for its continuance, except under conditions which ought not long to exist, would be unwise. The knowledge necessary to the proper treatment of the woods must come largely through experiment. It cannot be had unless the means of acquiring it are provided. I be-*

*lieve the means can be secured best through the purchase by the State of a tract of ground covered with those trees which are to be the subject of experiment. Such a tract the State should set apart and gain from it the knowledge which will enable it by and by to deal with the millions of acres it has already and will in the meantime acquire.*

"The time will come when the State will sell timber to the lumbermen, spruce to the pulp mills, reap a large revenue for itself and still retain the woods open to the public, protecting the sources of water, growing and yielding under intelligent cultivation. The management of this experiment should not be subject to the vicissitudes of politics. It should be placed in charge of the Regents or of the trustees of Cornell University or of some similar body not subject to political change. The State should pay such reasonable sum as may be needed to administer the plan. Reports should be made to the Governor and the Legislature annually of progress and results. The income from the tract so acquired should be paid to the State and the land itself should become the absolute property of the State and a part of the Forest Preserve at the expiration of the period named.

"I believe such a plan would be soon, if not at once, self-sustaining, for the trees now ready to be cut would produce immediate revenue and such revenue would be repeated at short intervals. The benefits could be hardly overstated, and in this direction, as in many others, the wisdom of New York entering upon a comparatively new and untried field, would be finally approved."

It was after the agitation and discussion only partially exhibited by the extracts which we have given that, upon the advice of Gov. BLACK, Chap. 122 of the Laws of 1898 was enacted. The theory of the bill was this: That the public interests of the State required the promotion of industrial forestry; that such forestry needed expert inspiration and guidance; that the State could best obtain such guidance from an institution like Cornell University, and more especially from Cornell University itself because of the intimate relations of the State with that institution; that, as the State could not use lands already owned by it for the forestry experiment, it must secure the use of lands belonging to other persons; that the State, in carrying out its forest policy, could and should promote the establishment, and aid in the maintenance of a forestry college,—and to make the college practically effective should provide it with the means to obtain suitable lands for forestry experiments; that these lands could not be State lands because upon such lands there could be no cutting; and that the University, therefore, should itself purchase the lands and, in consideration of the appropriation made by the State, should undertake to convey the lands to the State at the end of thirty years.

There would seem to be little doubt from the papers already quoted from that the Governor and Legislature were of the opinion that within thirty years the purpose of the present drastic constitutional prohibition against any cutting, good or bad, in the Adirondacks,

would have been sufficiently carried out, and that thereafter the public forests of the State of New York, like those of France or Germany, would, under some constitutional amendment, be used upon a careful and rational plan of forest culture.

I append to these *Notes* statements which fairly exhibit enlightened public sentiment on this question :

1. Extracts from the address made by President Roosevelt before the Society of American Foresters on 26th March, 1903.

2. An extract from the manuscript of a paper to be presented at its coming meeting to the American Institute of Mining Engineers by Prof. Rossiter W. Raymond, the Secretary of the Institute, upon the History of Forest Engineering in the United States. Learning that Prof. Raymond was about to read this paper and that in it he had considered the problems which bear upon the interest of the State of New York in continuing the Cornell experiment, I have obtained his permission to use the material and include herewith his letter of permission to me together with the paper. They show that the manner of conducting the Cornell experiment has the very warm support of this leader of practical scientific thought in the United States.

3. Editorial from the "New York Evening Post" of 20th February, 1902.

4. Editorial from the "New York Evening Post" of 6th June, 1903.

## I. Extracts from the address upon Forestry and Foresters delivered by President Roosevelt before the Society of American Foresters on 26th March, 1903.

And now, first and foremost, you can never afford to forget for one moment what is the object of our forest policy. That object is not to preserve the forests because they are beautiful, though that is good in itself, nor because they are refuges for the wild creatures of the wilderness, though that, too, is good in itself; but the primary object of our forest policy, as of the land policy of the United States, is the making of prosperous homes. \* \* \*

You yourselves have got to keep this practical object before your mind; to remember that a forest which contributes nothing to the wealth, progress, or safety of the country is of no interest to the Government and should be of little interest to the forester. Your attention must be directed to the preservation of the forests, not as an end in itself, but as a means of preserving and increasing the prosperity of the nation. \* \* \*

The forest problem is in many ways the most vital internal problem in the United States. \* \* \*

The relation between the forests and the whole mineral industry is an extremely intimate one; for, as every man who has had experience in the West knows, mines cannot be developed without timber—usually not without timber close at hand. In many regions throughout the arid country ore is more abundant than wood, and this means that if the ore is of low grade, the transportation of timber from any distance being out of the question, the use of the mine is limited by the amount of timber available.

The very existence of lumbering, of course—and lumbering is the fourth great industry of the United States,<sup>\*7</sup> depends upon the success

*\*7 "The industry of lumber and timber products ranks second among those of the census classification when measured by the volume of capital employed, and third when measured by the average number of wage earners and the total amount of wages paid, but it falls to the fourth rank when considered on the basis of the gross value and to the fifth in the net value of products." (Twelfth Census, Vol. VII, p. CLXII.)*

of our work as a nation in putting practical forestry into effective operation.

As it is with mining and lumbering, so it is in only a less degree with transportation, manufactures, commerce in general. The relation of all of these industries to forestry is of the most intimate and dependent kind \* \* \*

As all of you know, the forest resources of our country are already seriously depleted. \* \* \*

The United States is exhausting its forest supplies far more rapidly than they are being produced. The situation is grave, and there is only one remedy. That remedy is the introduction of practical forestry on a large scale, and of course that is impossible without trained men, men trained in the closet and also by actual field work under practical conditions.

**II. Extract from the Manuscript Draft of a Paper on the History of Forest-Engineering in the United States, to be presented to the American Institute of Mining Engineers, at its Meeting in New York City, October, 1903, by PROF. ROSSITER W. RAYMOND, Mining Engineer, Secretary of the Institute.**

The situation as it existed in 1898, was this: A few individuals and corporations in the United States had made more or less intelligent experiments in forest-management. An American Forestry Association, covering the whole country, and numerous State Forestry Associations, had been formed to influence public opinion in favor of some scientific general scheme of forest-administration; and books on arboriculture, including some reference to forestry, had received recognition from the press and a ready sale, which showed a lively public interest in the subject. The economic peril was coming to be realized, and Americans generally were convinced that something should be done to prevent the destruction of water-powers, the occurrence of disastrous floods, and the almost irrevocable exhaustion of the timber-supply. But no one could say exactly what could be done.

The United States, through various Acts of Congress, and the operations of the Division of Forestry, had already accomplished much work preparatory to a reform of the colossal waste of forest-resources. The establishment of forest-reserves on the public land; the maintenance of some degree of vigilance and discipline to prevent conflagrations; the prosecution of timber-thieves; the enactment of laws to encourage the planting of trees; the conduct of experimental investigations and the compilation of statistics concerning the amount, nature, growth, use and value of American forest-species; and the circulation of public documents containing helpful and educative information had done much to prepare the popular sentiment for more decisive measures. But the federal government had not created any school of instruction, except the Division of Forestry, which was a good deal better than nothing, but could only train foresters incidentally and incompletely. Nor had it inaugurated any extended forest-experiment, such as was imperatively needed both for the education of competent foresters, and for the study of American conditions.

The legislatures of sundry States had shown a vague conviction of the importance of the problem on its economic as well as its aesthetic side. But beyond such feeble remedies as "arbor-days" and premiums for tree planting, and laws for the prevention of forest-fires, no State had as yet supplied the pressing double need of a College of Forestry and a tract for forest investigations and experiments on a working scale.

Meanwhile, the pressure of a swiftly-approaching economic disaster was felt by those States which supplied forest materials; those which were consuming, as well as exporting their own; and those which were supporting their building and manufacturing industries chiefly by importation. In fifty years or less, at the existing rate of destruction, the available timber-reserves of the United States would be practically gone. It was high time to do whatever could be done at once; to learn what could be done in future; and to train the men

who were to do it, for the prevention, postponement or amelioration of this disaster.

Under our democratic system of individual enterprise, it might have been expected that private citizens or corporations, foreseeing the coming failure of the timber-supply, would have prepared for the large profit then to be realized, by commencing to develop forests of valuable woods by the various methods of forestry, especially the replantation of denuded lands. In certain favored localities, this could have been done, at a profit which would have repaid, after a period of years, the original and annual expense with moderate interest, while thenceforward the land would have been a permanent source of increasing revenue. But the general ignorance of forestry as a business was such that a piece of land, several years after successful replantation, was worth no more in market than if it had been just denuded. In other words, a coming forest-crop added no value to the land, unless it were very nearly ready to be harvested. Indeed, since it had to be tended at some annual expense, and since browsing cattle, as well as reckless campers, must be kept out of it, it would bring, perhaps, a smaller price than a piece of wild brush-pasture. Individual capitalists were not to be blamed, therefore, if they shrank from the cultivation of a crop which would require annual expenditure for years, and could not be sold without heavy loss until the time of harvest was at hand. People will take that risk for oranges, because they have examples before them of what will reward the patient culture of orange-trees. But regular economic silviculture was unknown here; and the public must see it before they would believe it.

Moreover, there were a hundred questions as to local conditions, such as: the best American trees for certain uses, and in specified localities; the best way to plant or thin out; the rate of growth and the amount and kind of required protection; the proper method to be chosen in each locality, with due regard to the commercial utilization of the product. We have heard a good deal of amateur talk lately, about American, as distinguished from German, forestry. In one sense, this antithesis is absurd, because there is no such thing as either an American or a German science. Everything that has ever been proposed here, with any claim to be called forestry at all, has been done over and over again in Germany, as in other countries. There is but one science of forestry; and it consists in the application of certain established principles to varying circumstances, and therefore in various ways. In another sense, however, the antithesis may (somewhat clumsily, I admit) state a truth, namely, that the mere blind copying, in an American district, of one out of the many German methods would not be wise. In fact, it would be only less unwise than the choice of some other German method, and its advocacy, after rechristening it as "American," for all the United States. This was indeed the overwhelming reason for such study and practical trial of American conditions as will lead to the intelligent choice of suitable methods, and a popular appreciation of them; and that could be done only upon a tract of varied topographical and other features, and of considerable extent, parts of which could be made demonstrative of various problems and methods.

New York was already at the head of all the States in appreciation of the importance of forestry engineering. It contained a large area



of wilderness, the greater part of which had been acquired from time to time by private owners, while the rest still belonged to the State. By successive steps, which I need not here describe in detail, many lands in default for taxes were restored to the State, while large areas were purchased and added to the "Forest Preserve." I think the general expectation was, that this region was to be maintained primarily as a protection of streams against floods, or, more specifically, to secure a uniform water-supply for the Erie Canal,—a purpose which had been suggested by Gov. Dewitt Clinton himself, the author of that great water-way, and especially emphasized by Gov. Horatio Seymour, on whose recommendation, in 1872, a State Park Commission was created, to make investigation and suggest action for the protection of this water-supply.

This was a praiseworthy purpose, and will become much more important if the Erie canal be enlarged in capacity, although a large part of the Adirondack water could not be utilized for the canal, because it flows into the St. Lawrence. Fortunately, what could be so utilized at all can be protected without sacrificing the economic management of the forests.

But afterwards the idea rapidly gained ground, that the entire area of the State Adirondack lands should be made a game preserve and park. This use of them would be proper enough, if the State chose to forego the revenue obtainable by systematic economic forestry, and if it were unwilling that any, even a very small, part of them should be used for experiment or education in such forestry. But there was no need to carry it so far as to impose an annual expense upon the State, without permitting even such cutting and sale of timber, from time to time, as would repay the cost of inspection, protection against fire, enforcement of the game-laws, etc. Above all, the creation of such a "Park" did not necessarily forbid the selection of a comparatively small area for experimental forestry, without hindering the pleasures or offending the taste of tourists and sportsmen, or destroying the protection of streams. This, I believe, was the idea of Col. William F. Fox, State Superintendent of the Forest Preserve, who is fairly to be regarded as the originator of the plan of the experiment.

But the Constitutional Convention of 1894 placed in the new constitution an express prohibition of all cutting of wood upon the Forest Preserve. The American Forestry Association, at that time holding a meeting in the White Mountains, forwarded an earnest protest, but in vain; and the friends of economic forestry felt, for a while, as if it had received a mortal blow, not because they had desired the destruction of the Adirondack Park, but because they had hoped that, in some corner of it, important scientific work might be done, while the rest was kept sacred to sport and pleasure.

A way was found, however, to carry out Mr. Fox's plan, without violating the Constitution, by enabling Cornell University to purchase a piece of land under a contract that on it the University should conduct the experiment and at the end of thirty years convey it to the State. During that period it was provided that the University might "plant, raise, cut and sell timber \* \* \* with a view to obtaining and imparting knowledge concerning the scientific management and use of forests, their regulation and administration, the production, harvesting and reproduction of wood crops, and earning a

revenue therefrom." By the same act, the College of Forestry was established at Cornell University.

As a working-capital for the forest experiment, \$30,000 was appropriated, and it was provided that moneys realized by the sale of wood might be used to restore or enlarge this working-capital. Of course, neither Cornell University nor any other party could receive any profits. Everything earned was to be used in the "College Forest."

The commercial conditions thus imposed upon the undertaking were a consequence of the unfortunate Constitutional provision above mentioned. The State, unable to devote a small fraction of its present Forest Preserve to this all-important object, was forced to contract with Cornell University that the latter should accept a grant of outside land; and conduct on it, for the State, an experiment in economic forestry; and agree to convey the land to the State after the experiment was sufficiently well under way to demonstrate results for the guidance of the policy of the State. After going to the expense of advancing the money called for by its contract with Cornell, the Legislature naturally felt that the experiment ought not to demand further annual outlays of public money. It must be made to pay its own way, by the sale of wood annually cut upon the tract. If it had been constitutionally practicable to take for this purpose a small part of the more than one million acres already owned by the State, the Legislature might have made an annual appropriation for the experiment, without requiring the cutting of timber to pay expenses.

This necessity had to be borne in mind in the selection of a suitable tract. Besides presenting a great variety of topographical and other conditions, the tract must furnish wood enough to pay for all the forestry work done in connection with it.

The particular tract selected was owned by parties who were desirous to sell it, and, if they had not sold it to the University, would have sold it to commercial purchasers, who would have exercised their undoubted right to denude it of its timber, without leaving any screen along roads or boundaries, or planting a single tree in the bared area, and putting all the profits in their own pockets. Under the "College Forest" arrangement, a part of the tract was to be harvested to pay expenses; all profits were to go to an object of scientific importance and practical usefulness; and (as is shown by the contract under which this cutting has been done) a forest-screen 25 rods wide would be left along rivers, streams, ponds, highways, boundary-lines and fire-lines. Evidently the owners of adjoining land were much better off than if the forest had gone the usual road to reckless destruction for private gain.

The situation, after the consummation of this arrangement, was this: The State of New York had solemnly, through its Constitution, made more than a million acres of the Adirondack region a permanent park for sportsmen and tourists. Nobody proposed to touch this luxury forest; and the constitutional dedication of it as a perpetual wilderness had already encouraged many wealthy persons to establish their summer-homes on small areas of private land within it, secure in the preservation, at no cost to themselves, of the "virgin forest" surrounding them. The Adirondacks had become a fashionable resort. But the State had also deemed it wise to establish a College of Forestry, and a "College Forest" outside of this inviolable park, using for the latter purpose a tract sure to be denuded anyhow, the operations upon which would work neither harm nor disturbance

to any one. It seems strange that those who had already received *gratis* such a benefaction from the State as the Adirondack Park should object to the small College Forest outside of it. Must the State give millions to wealth, and nothing to science and progress?

I will not here discuss in detail the results of the College Forest experiment thus far. It is hardly fair to judge, in less than three years, operations which were expressly organized by the Legislature to extend over a period of thirty years. But it is certainly known from the annual reports, and from other sources, that important information has already been obtained. The operation, made necessary by the law, of cutting wood to pay expenses, though the one most talked about, is not the real experiment at all.

An abandonment of this work would be most calamitous. New York would thereby sacrifice her proud position as the pioneer in this new department of American economics. The Legislature of New York has never pronounced any such doom upon it. I trust it never will. If it does, and if the Trustees of Cornell University finally abandon the College of Forestry, which they have recently "suspended," the disgrace to the Empire State, and the injury to the cause of economic forestry will be complete. But the right thing will certainly be done—to our shame, and at a loss of vitally important time, no doubt—but somehow and somewhere by somebody. And it will stand as the one stain upon the scutcheon of the Empire State, that she knew her duty so well as to begin to do it—yet turned back from it, and did it not.

R. W. RAYMOND.

[Letter from Prof. R. W. Raymond.]

NEW YORK, July 1st, 1903.

EDWARD M. SHEPARD, ESQ.,  
26 Liberty Street,  
New York City.

MY DEAR SIR: In accordance with your request, I send you herewith my statement and opinion concerning the "College Forest" established by the Legislature of New York.

Although not a trained professional forester, I may claim some right to be heard on this subject, because of my long connection with it, as an observer and, to some extent, an author.

Forty-four years ago, I was studying my profession as mining engineer in Freiberg, Saxony, only an afternoon's walk from the Saxon School of Forestry at Tharandt; and I date from that period my interest in forestry, which was subsequently enhanced by my inspection of European forests, and my acquaintance with foresters, during the three years of my study and travel at that period.

Beginning in this country, after my service in the U. S. Army during the Civil War, the practice of my profession, I traveled extensively (at first as consulting engineer for private parties, and afterwards as U. S. Commissioner of Mining in the States and Territories in and West of the Rocky Mountains), in many parts of the Union, and learned much concerning forest-conditions in the larger portion of its area.

Both in the far western region and in many Eastern States, the question of timber supply was then, as it has been ever since, a vital one to the mining and metallurgical industry. The availability of timber for underground supports, of wood-fuel for steam-engines and (mostly as charcoal) for metallurgical operations, and of lumber for buildings, was a foremost consideration in every professional mining report. I was thus led to look with consternation upon the progressive and wasteful destruction of the forest resources of the United States, and to study the possibilities of forest-engineering in the United States as a guard against the foreseen disaster.

I have followed with interest (and with a knowledge not confined wholly to the contents of public documents) the progress of this imperatively necessary movement in the United States.

Many years ago, while, as Engineer of Messrs. Cooper & Hewitt of New York, I had general advisory charge of large woodland tracts, owned by that firm, I employed Mr. B. E. Fernow, first to examine and report upon these tracts, and subsequently as the resident manager of one of them. I believe that the practical ability displayed by him in this capacity led to his appointment as Chief of the Division of Forestry at Washington, and subsequently as Director of the Cornell College of Forestry, for both of which places he was heartily recommended by Abram S. Hewitt. I have had continuous knowledge of his labors, difficulties and achievements in both, and, from time to time, I have published critical comments thereon, as well as reviews of the general situation as to forestry in this country.

Yours truly,  
R. W. RAYMOND.

### III. Editorial from the "New York Evening Post," February 20th, 1902.

Professor Fernow of the State College of Forestry is likely to be completely vindicated, as the result of the hearing before the Forest, Fish and Game Commission and the reference of his contracts to the Attorney-General. It appears that in this matter the Forestry School has come in for criticism of a purely sentimental kind on the part of summer residents in the Adirondacks. The school owns a tract of 30,000 acres (about seven miles square) of land, mainly forested. This tract it must administer in the interest of scientific forestry, not of scenic effect. Director Fernow is not planning for this year or next, but for the whole future of the school. He must study the most lucrative methods of replacing an unprofitable forest by a profitable, for upon this depends the support of his school. This may mean the temporary cutting off of entire tracts which it is undesirable to maintain as "mixed forest." It was, in fact, the cutting off of a few hundred acres last year which brought down upon the school great and apparently quite undeserved criticism. An article in the last number of *Nature* shows that replanting has progressed satisfactorily, the college having set out a hundred trees for every four cut. It is not generally understood that the cutting which has been done affects not the State reserve, but the especial preserve of the school. No one can doubt that Professor Fernow is competent to do

what is best for the future with this tract. He will surely feel that it is in the interest of his school to avoid, so far as possible, offending even the sensibilities of those who wish a practical forester to act like a park commissioner.

#### **IV. Editorial from the "New York Evening Post," June 6th, 1903.**

The State also made an annual appropriation for its School of Forestry. That of 1902 was for \$10,000, where \$30,000 had been asked for. This year the appropriation was vetoed by the Governor, and now the Attorney-General has been requested by certain summer residents of the Upper Saranac Lake region to bring an action to annul the "grant of forest lands to Cornell University"—so the dispatches read. Naturally the newspapers have fallen into the habit of considering the University the beneficiary of both the grant and the appropriation. This is not the first time that the mistake has been made, although the fact is that the State is indebted to the University in respect to this school. The University has no pecuniary interest in the School of Forestry that is not common to all citizens of New York. What is at the bottom of this rage against the School of Forestry it is difficult to see, unless it may be the mere objection of campers, hunters, and summer residents. The objectors, whoever they may be, say that the State Constitution is violated by the removal of timber from the ground "for purely commercial purposes." There has been no removal of timber for any such purpose. If the science of forestry is to be taught at all, it must be done by first clearing some portion of the land for the reception of new growth. The timber removed would naturally be sold on the general ground of economy and for the special purpose of reimbursing the State for the cost of cutting and hauling. The only question which now confronts the State is that of continuing the scientific instruction in forestry which it has begun or of abandoning it.

LIBRARY OF CONGRESS



0 000 897 877 3



**LIBRARY OF CONGRESS**



00008978773

Hollinger Corp.

pH 85