ITASCA STATE PARK AS A DEMONSTRATION FOREST AND FOREST EXPERIMENT STATION.

SAMUAL B. GREEN, PROFESSOR OF FORESTRY, UNIVERSITY OF MINNESOTA.

The present condition of the forestry problem shows a very general desire on the part of thinking men to have this source of wealth on a practical, helpful basis. This desire, however, is largely undirected, and it is important to unite all friends of forestry for that which can best be undertaken at this time.

More has been done for agriculture by education of the young than in any other way, and undoubtedly we should approach the forestry subject from this standpoint. Previous to the establishment of agricultural education upon a practical, helpful basis little advancement was made from year to year, but since then the whole character of agriculture has changed, and it has become much more productive and satisfactory in every way.

We have an enormous area in Minnesota especially adapted for forests and another large area which will not be needed for agriculture for a long time. It is foolish to neglect this great source of wealth, as we are now doing. The cut-over lands of Minnesota are today almost unproductive.

There is a course in forestry in the state university, and the regents desire to bring it into closer touch with and make it more helpful to the great forestry interests of this country. Note the following resolution recently adopted by the board:

Resolution of Board of Regents asking for land for forestry demonstration:

At a meeting of the Board of Regents, October 4, 1906, the following resolutions were adopted:—

Resolved, by the Board of Regents of the University of Minnesota, that the course in forestry in the University of Minnesota would be greatly improved and be made more helpful to the great forestry interests of our state were it provided with proper facilities for carrying on demonstration work in forestry, and,

Resolved, that we recommend to the legislature of the state of Minnesota that it provide suitable facilities of this kind from forest land held by the state and make reasonable provision for the maintenance thereof.

C. D. DECKER,
Sec'y Board of Regents.

Just at present there is a great and special need of a demonstration forest in order to make the forestry work of the state university most practical and helpful. In the case of agriculture, students can go to the good farmers of the state for field instruction, but in the case of forestry there is scarcely such opportunity.

A demonstration forest, too, would be of much help to the owners of timber lands in showing them the possibilities of such property. Such a demonstration forest would in effect be a forest experiment station.

The idea is that the forestry students of the university should before graduating be required to serve at least seven months in practical work in forestry. It is a fortunate coincidence that the State of Minnesota has in Itasca Park a tract of land in every way adapted for this purpose and which would be improved by being used as a forest reserve as well as a park. Under present conditions there is little to encourage visitors in going to this place, but with forestry added to its park features it could be made a more popular resort.

A bill has been prepared by Attorney General Young to bring this about, and it will be introduced in the legislature shortly. This measure has the approval of Governor Johnson. By its provisions Itasca Park is placed under the State Forestry Board for general management, and provision is made for permitting the use of as much of it as may be needed for demonstration work in connection with the forestry courses in the University of Minnesota.

The story of Itasca Park, and a discussion of the way in which it might be used to special advantage in helping develop forestry in Minnesota, is well told in the following article by Mr. E. G. Cheyney, the assistant in forestry in the University of Minnesota.

STORY OF ITASCA STATE PARK.

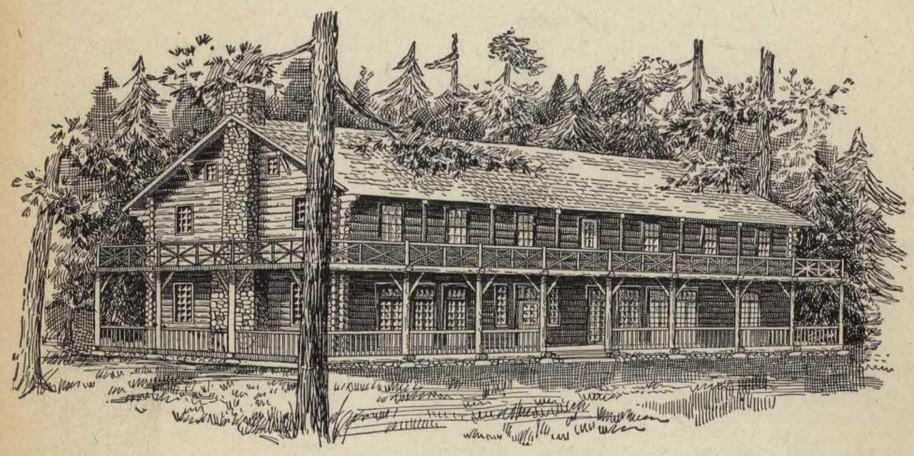
E. G. CHEYNEY, ASS'T. IN FORESTRY.

Under direction of Samuel B. Green, Professor of Forestry, Minnesota State University.

(Issued by the Minnesota State Forestry Association.)

Description. Itasca Park was established by act of legislature in 1891. It consists of about 15,000 acres near and surrounding Lake Itasca, being partly in Hubbard county, partly in Becker county, but mostly in Clearwater county. The center of the park is about twenty-five miles north from Park Rapids and about the same distance a little west of south from Bemidji. The enclosed area is hilly and fairly well covered with a growth of pine and hardwoods.

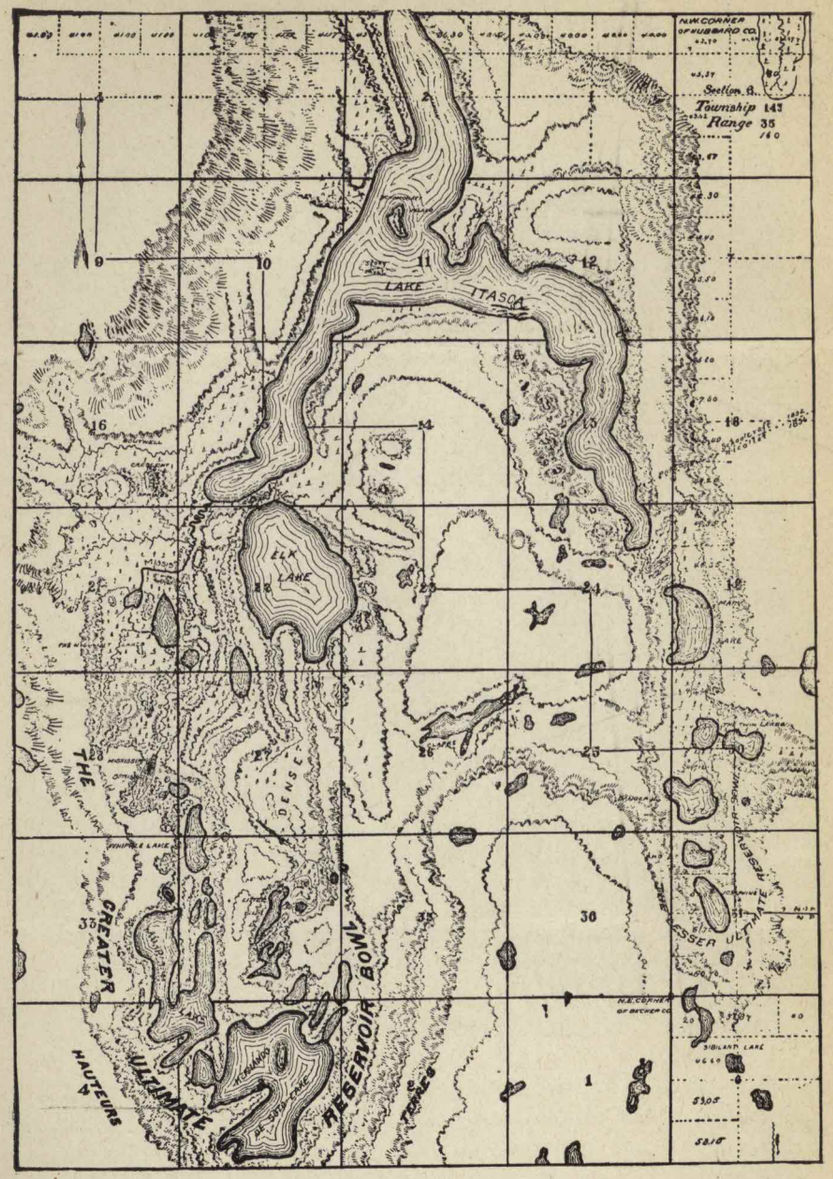
Purpose. The purpose of the park is to preserve the source of the Mississippi River inviolate from commercial desecration and keep it forever accessible to the general public. In addition it



DOUGLAS LODGE, ITASCA STATE PARK.

is to preserve to future generations a remnant of the great primeval forest which has played such a large part in the development of the state. It is right that our children and children's children should have these two features of historic interest handed down to them intact.

Standing Timber. Itasca Park is well suited to subserve both of these purposes. Within its boundaries stand 23,000,000 feet of



EARLIEST MAP OF ITASCA STATE PARK.
(Drawn by J. V. Brower, 1890.)

virgin pine, a good sample of the forests which once covered the Lake States region and played a star part in the development of the whole country.

Source of Mississippi. The lakes and springs forming the source of the Mississippi are all included in the park, and the first trace of a distinct stream which can really be called the Father of Waters flows from the north end of it. It is only sentiment that makes these features worth preserving, but it is a sentiment well worth the trouble.

Accessibility. Ample provision has been made by the legislature to foster this sentiment and make the points of interest accessible to the public.

New Lodge. In the center of the park, a magnificent two story log lodge has been built and well furnished as a headquarters for the superintendent and for the accommodation of visitors. A good road from Park Rapids to Bemidji passes by the door of the lodge, and a stage line from Park Rapids to the postoffice of Lake Itasca furnishes a daily mail service and daily means of entrance and egress.

Old Lodge. Three miles farther north on the same road, also on the shore of the lake and one mile from the north boundary of the reserve, is the old lodge, an eleven room house, now uninhabited, the first building put up for the superintendent and for the accommodation of guests.

Game Preserve. Hunting of every kind has been prohibited in the park ever since its establishment, and all kinds of game have prospered and multiplied under the protection. It is the one accessible place in the state where it is possible to see many grouse and quail, deer, beaver and an occasional moose in their natural habitat as they were found throughout the country in days gone by.

Danger from Fire. Such are the provisions that have been made for the preservation of the forests around the headwaters of the Mississippi. But are they really preservative measures? They make these points of interest accessible to the public, but they do not provide for the real preservation of them. The protection of the forest from fire, the arch enemy of the pine woods, which has destroyed thousands of acres of pine timber, has been left entirely to chance. One fire started through carelessness in the adjoining woods might, and is only too apt to, sweep all the forest away in a day and leave the now beautiful lake an unsightly puddle in the midst of a barren country. Several generations of careful and expensive labor would then be necessary to restore the coun-

try to its present condition. The risk is too great and entirely unnecessary. The park could easily be made immune to this danger, and provisions should be made to that end. No one man can do it.

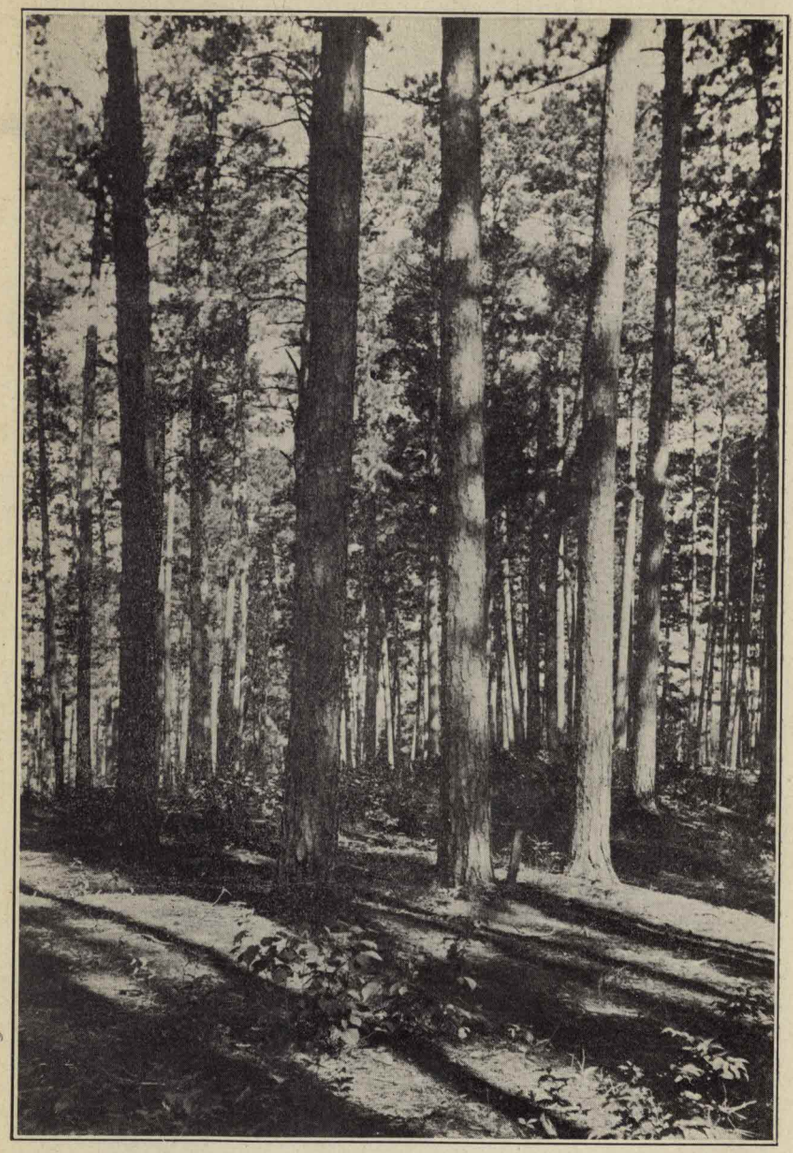
Transfer of Reserve. The most satisfactory solution would seem to be, as is now proposed, to place the park under the control of the State Forestry Board, which is best equipped for the handling of such a problem. A forester, trained in the care and protection of the forest, could then be placed in charge of the reserve and proper measures taken for its protection.

Fire Protection. A comprehensive system of fire-breaks should be made around the boundaries of the whole reserve to protect it from fires originating without, with secondary breaks in the interior to prevent fires originating in one portion of the reserve from invading the whole area. The part of the road in the reserve, now poorly laid out and in poor condition, should be relocated, put in thorough repair and incorporated in the system of fire-breaks.

Ideal Place for Forest School. The conditions on the reserve, even its shortcomings in the necessity for planting and fire protection, make it an ideal place for a Demonstration School of Forestry. In such studies more can be learned in a week from actual work and illustrations than from a month of lectures. The work in the demonstration forests at Yale and Michigan is there looked upon as the most important in the whole curriculum. The Minnesota Forest School, in one of the greatest timber states in the union, is without a foot of forest on which she can practice her preachings. The use of Itasca State Park for this purpose would make the Forest School for the University of Minnesota, better equipped than any other forest school in the country. It would in effect form a forest experiment station.

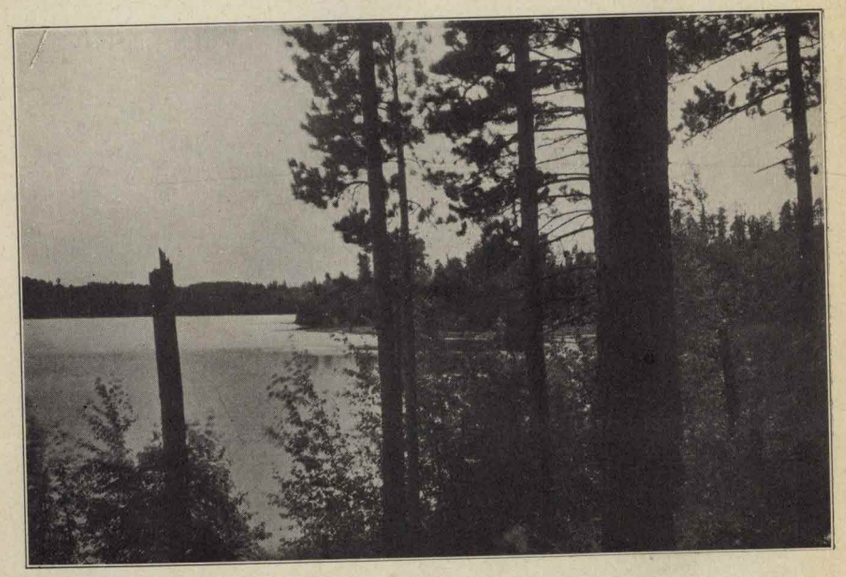
An Assembly Hall. The old lodge, now uninhabited, could be fixed up at a small cost as a central messroom and assembly hall to accommodate a large number of students. Stables, sheds and otherer buildings are in fairly good repair. Around the main building is a good camping ground for any number of tents.

Seeding and Planting. The necessary planting up of the openings in the forest would require a large nursery. This (under the supervision of a trained man) would furnish ample opportunity—the best in the country—for the students to learn nursery practice and wood's planting. It would increase the value of the forest many times, and there would be a young forest to take the place of the old trees, large numbers of which are dying off yearly.



NORWAY FOREST NEAR DOUGLAS LODGE, ITASCA STATE PARK.

Management. The clearing out of the dead and down timber, the burning of the slashings and the establishment of the fire-breaks would furnish ideal illustrations and actual work in the care and protection of woodlands. The surveying and actual building of the roads and rides in the woods would give just such practice in practical field work as the forester needs. Surveys for working plans and planting plans, estimation of standing timber, studies of growth and of logging methods (logging in the near neighborhood of the park would furnish plenty of the last named), and all other problems of the woods could be studied out along with the daily work and accompanied by lectures to direct the work. There would be no time lost in working at random, as is now bound to be the case when the students go off by themselves to work in the woods for the summer.

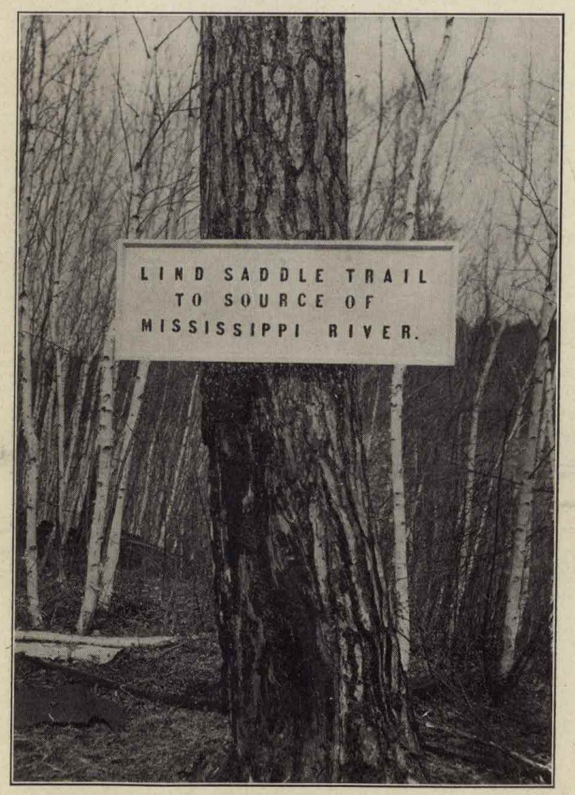


VIEW LOOKING WEST ACROSS MARY LAKE.

Advantage to Reserve. Such would be the advantages which a forest school from the first of April to the first of October would reap from the reserve. In return the reserve would receive such care and attention as it could never get in any other way. The nursery work, the planting, the construction of fire lanes, the removal of dead and down timber, the building of roads, all would be done by intelligent men with their whole interest in the

work and always directly under the best supervision. All through the danger season there would be an adequate force of men trained in the art of fire-fighting at hand ready to answer the alarm at a moment's notice. There would be a continuous patrol of the whole reserve, making extensive damage from fire impossible. All labor done in this way would be of the cheapest in the end.

Nursery Work. Millions of seedlings will be needed in the next few years for planting on this and other forest reserves in the state. A large nursery for forest trees would be desirable. in connection with the forest demonstration and school features. Such a nursery might supply seedlings to forest planters at cost. Today the farmer who wants to make a plantation of forest trees has trouble in obtaining a sufficient quantity of tree seedlings at reasonable rates and in getting species that will succeed in his section of the country. The nurserymen are not as yet prepared to



SIGN BOARD ON THE SADDLE TRAIL BUILT BY GOV. LIND.

supply this trade. The surplus of seedlings in the nursery not needed for the reserves could be sold to such buyers at cost, and no seedlings would be sold except those suited to the section in which they were to be planted. This would be an enormous advantage to tree planters all over the state and would do much to promote and improve the planting in prairie regions without in any way competing with the nurserymen of the state.

A Model Forest. The reserve would be conducted on the lines of a model forest managed according to scientific forestry methods. It would be a place where the lumbermen could see the results of such management. One trip through such a reserve would do more to convince the practical lumbermen of the feasibility of

OLD LODGE—NOW BOARDED UP.

such methods than all the talking under the sun could ever accomcomplish. It would be a place where they could come to study improved methods and obtain accurate figures as to such matters. The effect in raising the lumbering standard throughout the state could not but be tremendous. It would call the attention of the public to the practicability of forestry methods as nothing else has ever been able to do. "Seeing is believing" is the old saying, and it is becoming more and more the standard of modern education.

Experiment Work. Such an institution would necessarily include an experiment station in forest management and methods, experiment being another fundamental principle of modern education. In the reserve would be carried on experiments along all lines connected with forest work. Experiments in nursery work, thinnings and tree growth could be admirably conducted under the direction of the trained men connected with the forest school. Careful records of such work would furnish valuable data for the whole lake region, especially in Minnesota. There are something like 5,000,000 acres of land in this state that must, from its nature, be kept in forest. The economic handling of that forest land means millions of dollars to Minnesota. Nothing could do more toward bringing about the wise handling of this land than such a forest school, experiment station and model forest.

Rights of Visitors Preserved. These arrangements would not in any way interfere with the rights of the general public in the enjoyment of the beauties of nature included within the reserve. It would increase them. The original purposes of the park would be in no way impaired. The new lodge would still be conducted as a summer hotel for the accommodation of guests. The lake, the romantic source of the Father of Waters, would be more accessible than ever before; the primeval forest would be really opened up for their enjoyment for the first time. Moreover, there would be the added interest of a forest school, an experiment station and a model forest—all in full operation. The number of people enjoying the privileges for which the park was originally established would be greatly increased, and these would all get an insight into practical forestry.

An Improved Park. The transfer would change Itasca Park from an inert, neglected, uninstructive bunch of primeval trees, steadily dying out, to a live, carefully-tended, enlightening forest. It would contain an ideal Demonstration School of Forestry which would place the University of Minnesota at the head of the list in that line of work, and a Forest Experiment Station which would make rapidly for the development of better forestry methods. It would be the concrete illustration of practical forestry that the state so greatly needs.

SUMMARY.

The state property known as Itasca Park consists of:

14,000 acres of land, partly donated by the U. S. Government and partly purchased by the state.

26,000,000 feet of standing pine, valued at	$230,000.00
Douglas Lodge and equipment, valued at	18,000.00
Old Park House, valued at	1,000.00
Total value exclusive of land	$249,000.00

Standing Appropriations.

For the purpose of acquiring new land within the park	5,000.00
For the salary of the superintendent	600.00

There is no fire protection; this is left to chance. A bad fire would destroy its value as a park.

It is now managed as follows:

The Governor is in charge and appoints the superintendent.
The Attorney General has charge of acquiring new land.
The State Auditor has charge of the school lands within the park.

It is proposed to place the park in charge of the State Forestry Board. Governor Johnson has recommended this in his message to the legislature.

The Board of Regents of the State University has asked the legislature to provide opportunity for demonstration work in forestry on some state land. It is proposed to do this in Itasca Park, which is well fitted for the purpose.

It is the belief of those well informed in forestry matters that instruction in forestry without field work is weak. Just at present our great forestry problems need, more than anything else, young men who are educated in forestry. Education can do for forestry what it has done for agriculture. If Itasca Park is used as recommended the distinctive park feature will not be disturbed. It would become a demonstration forest and a forest experiment station. Experiments would also be made in determining how quick-growing woods, such as cottonwood, willow and maple, can best be treated to make them more durable and valuable for construction purposes.

The bill referred to carries appropriations as follows:

For forestry instruction and experimentation under the State University	$5,000.00
For firebreaks, nurseries, etc., under the management of the State Forestry Board	3,000.00
Total	$8,000.00

The items for these appropriations are in detail as follows:

Firebreaks	$1,000.00
Repairs on old Park House	500.00
Furniture for old Park House	500.00
Repairs on road	500.00
Three teams and equipment	1,500.00
Tools	300.00
Clearing ten acres for nurseries and garden	300.00
Seeds and plants	300.00
Experiments in the impregnation of cottonwood and willow to increase their durability in the soil and their value for structural purposes	1,000.00
Improvement on the lake shore	200.00
Salary of forester and teacher	1,500.00
Tree planting and improvement cuttings	400.00
Total	$8,000.00