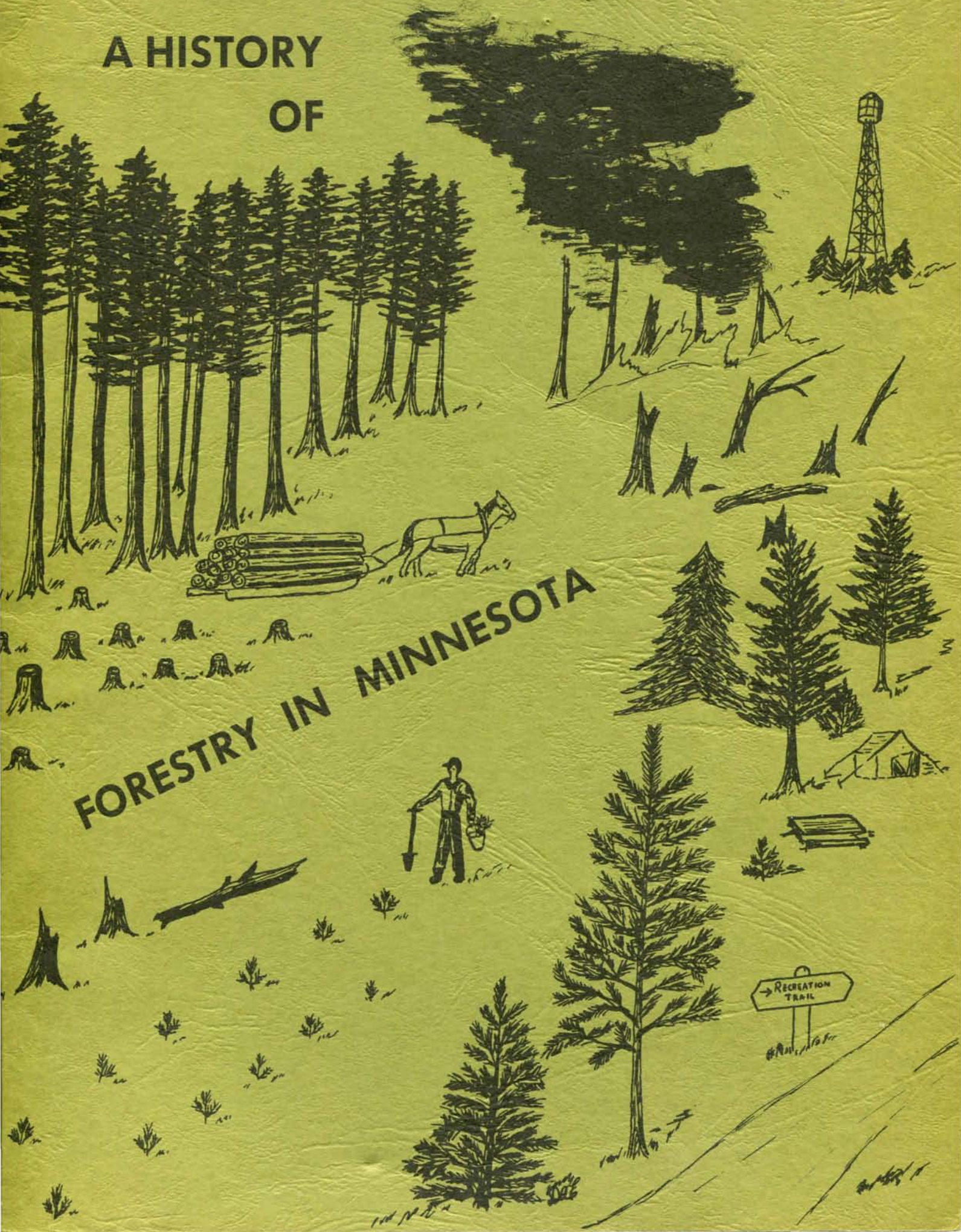


A HISTORY OF

FORESTRY IN MINNESOTA



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The Association of Minnesota Division of Lands and Forestry Employees voted at the 1969 Annual Meeting to publish "A History of Forestry in Minnesota." Area Forester Joe Mockford, at that same meeting, offered \$600 to help defray expenses.

Since then, many people have helped make it a reality, and it is not possible for all to receive the credit they deserve. Dorothy Ewert brought the history up to date, the Grand Rapids Herald Review and Chuck Wechsler of the Conservation Department's Bureau of Information and Education helped a bunch of amateurs prepare it for printing. Ray Hitchcock, President of the Association, and Joe Gummerson ran the business end.

Our thanks to all of these.

"A History of Forestry in Minnesota" was compiled by Elizabeth Bachmann over a period of ten years. Miss Bachmann collected the data used in this publication and compiled it as a sort of legacy to the forestry fieldmen.

A History of Forestry in Minnesota

**With Particular Reference to
Forestry Legislation**

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A History of Forestry in Minnesota

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*An Early Forest Service
Badge*



Minnesota's Stands of Pine Today As Magnificent as its Virgin Forests

A HISTORY OF FORESTRY IN MINNESOTA

INTRODUCTION

Great forests covered much of the land that was to become Minnesota. Virgin white and Norway pine, interspersed with spruce and hardwoods, covered the northern half, with the exception of a narrow fringe of prairie land on the western border. Magnificent hardwood forests clothed a great portion of the southeastern section and grew along the rivers and their tributaries. The rest was open prairie.

It was all *Indian territory*. In 1635, a French explorer, named Jean Nicollet, obtained the first information about the Indians in this part of the country. Then followed Radisson and Groseilliers, Dulhut, and Hennepin. In 1689, the land was claimed for France by Nicolas Perrot. By the Treaty of Versailles, the land east of the Mississippi River was ceded to England in 1763. It came under the jurisdiction of the United States by the treaty of peace with England in 1783. In 1762, the country west of the river had been ceded to Spain. Then France obtained it from Spain and it was included in the Louisiana Purchase of 1803. Through successive agreements and treaties, the area became a part of various territories and finally, in 1849,

became Minnesota Territory. Of the total area of 51,749,120 acres, about 33,000,000 acres were covered with forests.

Although white men - explorers, voyageurs and missionaries - had visited Minnesota as early as the seventeenth century, these great forests were wholly undefiled by man. But when the settlers began to drift into the hardwood forests in the southeastern portion of the State, about the beginning of the nineteenth century, they immediately wielded the axe. The timber was needed to build their log houses, and they needed the land cleared to raise their crops. Timber was something they had to get rid of.

Although the open prairie was not far beyond, the settlers preferred the hardwood forest region. It was so much like the land to the east from which they had come, and they felt at home here. Moreover, it was the only part of the state which had been acquired from the Indians. The Sioux were still guarding the western prairies from the white man. Furthermore, there was a strange belief that prairie land was not good for growing grain - that it was infertile.



A Typical Bunkhouse Scene Around the Turn of the Century.

THE BEGINNING OF THE LUMBER INDUSTRY

The First Sawmills

All the building material used by the early settlers had to be hewed with an axe or sawed with a whipsaw by hand. The first sawmill was constructed by the government in 1821 at St. Anthony Falls to supply timbers for Fort Snelling which had been established two years before at the junction of the Minnesota and the Mississippi rivers. In 1838, the first commercial mill was built to saw white pine lumber at Marine-on-the-St. Croix, and it continued to operate there for three-quarters of a century. The village which grew up around the mill was the earliest settlement in the valley. It was named Marine for the home of its founders in Illinois. A large bell now situated in the village park was cherished by generations of residents. It had been brought from St. Louis in 1857 to serve as a church bell. Prior thereto, it had served for many years as a steamboat bell.

White pine was king in Minnesota forests. Lumbering had migrated from Maine along the Atlantic coast to Pennsylvania, and in due course of time it swung to the Great Lakes region - to Michigan, Wisconsin and Minnesota - now known as the Lake States. While the hardwood forests - *The Big Woods* - were for settlement, the forests of pine - *The North Woods* - were for logging. Among those hardy pioneers were experienced loggers trained in the forests of Maine.













At first they lacked a market. The population of Minnesota was less than 5,000. Then the lumber industry was opened dramatically with the successful rafting of logs and lumber down the St. Croix and down the Mississippi to points in Iowa and on to the distant settlement of St. Louis. Lumbering inevitably became the leading industry, as it has in turn been the leading industry of every forested state.

The largest raft of lumber that ever floated down the current of the *Father of Waters* arrived at St. Louis in the summer of 1902 from the Minnesota pineries. Not only was it the biggest on record, but it made remarkably quick time to its destination. It contained 5,500,000 feet of timber and was towed by two steamers. It left Stillwater on the tenth of June and arrived at St. Louis a little over three weeks later in spite of delays for repairs.

The settlement of the State did not begin in earnest until the Chippewa Indians ceded that portion of the State east of the Mississippi to the government in 1837. Once settlement was started, the lumbering industry took a lead as a matter of course. The first sawmill was built at Marine-on-the-St. Croix a year later, and four more were opened up at Stillwater after 1843. This was the largest town in the territory at the time and was looked upon as the coming metropolis of Minnesota. The foremost reason why lumbering started on the St. Croix instead of the Mississippi was because the triangle of land between the Mississippi, the Rum and the St. Croix rivers contained the only white pine timber covered by treaties with the Indians.

Not until 1847 was there a commercial sawmill built at the Falls on St. Anthony, which is the present location of Minneapolis. The logs for this mill were cut on Dutchman's Island at the mouth of the Rum River. The first year, however, the mill was idle because the boom which held the logs broke in the spring flood and most of them floated down the Mississippi to Dubuque, Iowa, and points even farther south. Since all the other timber available on the river belonged to the Indians, the mill owner had to negotiate with Chief Hole-in-the-Day for timber to supply the mill. The astute old Indian demanded half a dollar for every white pine tree cut.

The only water-powered sawmill still operating in the State in 1965 was the one located in Wright County near St. Michael. The dam and original mill were built about 1898. The sawmill, rebuilt in 1920, sawed from 5,000 to 8,000 board feet of lumber per day, mostly on a custom basis.

DAVID TOZER Pitchfork 	E. W. BACKUS B scalp A 	W. D. WASHBURN C. double Y reversed H 
CHAS. BRYENTON Reel 	JONATHAN CHASE Cross cross on two girdles cross 	ERASTUS BYERS Two double darts 
THOMAS CARMICHAEL Snowshoe 	J. S. PILLSBURY & CO. TEL combined girdle twenty A 	J. B. BASSETT & CO. Roof Y girdle twenty 
McFARLAND & PICKETT New hat 	T. B. WALKER TWB combined 	FARNHAM & LOVEJOY F thirty combined H 
END MARKS	BARK MARKS	END MARKS

Log Marks were as important to the early loggers as brands were to western cattlemen. These are some of the marks used by the major companies during the early days of logging in Minnesota.

Log Marks

As more and more timber was cut and floated down rivers, the marking of logs became a necessity for it was the only way the various owners could identify their intermingled property. The log marks and methods of lumbering in the Maine woods were transferred to the pine forests of the Lake States. In 1858, a law was passed which provided that log marks must be recorded in the office of the Surveyor General of Logs and Lumber and that each mark had to be distinctly different from any other mark (Minn. General Laws, p. 267). At the peak of the lumbering period in Minnesota, more than 20,000 log marks were recorded.



Lumber Camp and Crew Near Waldo, Minnesota, in 1897.

Logging Crew Prepares to Roll a Load of Logs from a Horse-drawn Sleigh at River Landing.



Thousands of Cords of Pulpwood Await Spring Thaw Along the Littlefork River.

Loggers Begin the Spring Drive by Sluicing Logs Through the Sluiceway on the Nemadji River. Note the Earth Dike Holding the Head of Water.



In the office of the Surveyor General, there was a vault filled with huge record books in which these log marks are recorded. These record books are now in the Historical Society library. Their volume testified to the magnitude of the pine harvest when lumbering was at its peak. Large portions of the later records are in the fine Spencerian handwriting of Albert D. Cook, who for 44 years was connected with the Surveyor General's office. Mr. Cook, who died in 1952 at the age of 90, was born in the little settlement of Manannah in Meeker County. During the Sioux Indian uprising of that year, when so many of their white neighbors were massacred, his widowed mother with her infant son made her way on foot to the village of Monticello. The following spring, they moved to Anoka on the Rum River, and he eventually joined the Surveyor General's staff. He is rightly credited with knowing more about log marks than any man in the State. He was a woodsman of the old school. When giving his name over the telephone, it was usually "A for axe and D for devil Cook."

More Sawmills Spring Up

As the government acquired more lands from the Indians, logging camps pushed up the Rum River to Princeton and far up the Mississippi. Dozens of sawmills sprang up, and logging towns blossomed out everywhere along the northern streams. By 1870, they were as far north as Little Falls.

By this time, the prejudice against the prairies had been overcome and with the great influx of settlers there was a demand for more and more lumber. This was a great contrast to the period when timber was a drug on the market, when it was a by-product of land clearing, when the surplus, which was not needed for building purposes, was destroyed in the most convenient way - by fire. This surplus had resulted in the famous log rolling bees, when neighbors gathered together and burned great piles of logs. But there was nothing else that could be done with the timber. The loggers expected to sell the land that had been cleared. Every big lumber company had a land department for the disposal of cut-over lands.

With the opening up of the prairies, this was changed. When one could plow in the spring and have a crop in the fall, no one wanted to settle on land that had to be laboriously cleared of stumps. As a consequence, vast areas of the cut-over lands were abandoned, and they became the tax-delinquent lands that plagued a later era.

The Railroad Comes

Lumbering continued in the northern area. In 1862, the first railroad reached the Mississippi at Prairie du Chien in Wisconsin, and by 1870, it had pushed as far north as Duluth. After that the lumber from the north could come south to Minneapolis, instead of going east by steamer, as it had up to that time. Although Duluth was an ideal place from which to ship the lumber, it was difficult to assemble logs there. So many logs were broken up at the falls in the Cloquet River and so many log jams occurred that the mills were established above the falls at the site of Cloquet. The first mill in Cloquet was built in 1878 above the big falls at Thomson. This new mill town soon led the north and

by 1926 led the whole State in lumber production. It became a great lumber manufacturing center. It still supports many large wood-using industries today.

The Paper Mills

As early as 1859, a mill at St. Anthony Falls manufactured paper of rags. The spruce forests soon attracted the attention of the paper industry, and the first wood-using paper mill was built at Cloquet in 1898. Others followed at International Falls, Brainerd, Grand Rapids, Sartell, and Little Falls, and the towns became paper manufacturing centers. For many years, nothing but newsprint paper was made from ground spruce and balsam. Later sulphite mills were built at International Falls and Cloquet, and the use of other woods and the manufacture of other products became possible. This made a market for the smaller material of many species such as black spruce, white spruce, jack pine and aspen not well suited for lumber. Forest products still are important in the economy of each of these towns.

THE APOSTLE OF FORESTRY APPEARS ON THE HORIZON (from *History of Minn.* Vol. 4, Folwell)

In June of 1869, President Ulysses S. Grant appointed as Minister to Sweden and Norway a man who was to have a very great influence on forestry in Minnesota. He was a man with a high military title and two given names which excite the imagination. This man was General Christopher Columbus Andrews. During his eight and one-half years as Minister, he had an opportunity to study the Swedish forestry system and to make a comprehensive report on it. What first attracted his attention were the numerous checkerboard patches of forest with their trees in various stages of growth. His report was included in the foreign relations documents of 1872-73 by Hamilton Fish, Secretary of State of the United States.

Because of his impact upon Minnesota forestry, it seems appropriate to give something about Andrews' personal history. His ancestors settled in Massachusetts in 1635. He was born on October 27, 1829, in Hillsboro, N.H., the son of Luther and Nabby Andrews. He graduated from the Harvard Law School and was admitted to the bar in 1850. After practicing law in Newton, then Boston, Mass., in 1854 he joined the migration of settlers to Kansas. From Fort Leavenworth he wrote letters to northern newspapers encouraging free-state immigration. After six months, he was appointed to a clerkship in the Treasury Department in Washington, D.C., by his friend President Franklin Pierce. In 1856 Andrews, being of a restless disposition, as befitted his name, again went west, this time to Minnesota.

In 1857, he began to practice law in St. Cloud. Law led to politics, and in 1859 he was elected to the State Senate. Two years later, he helped to found the newspaper, *The St. Cloud Union*, but, because of the pro-slavery views of his associate, S. B. Lowry, he withdrew from the partnership.

When the Civil War broke out, Andrews enlisted as a Private but was soon promoted. He fought at Murfreesboro with the Third Minnesota Volunteer In-

fantry. The colonel of his regiment surrendered to General Forrest over Andrews' vigorous protest. During his three months in a southern prison, Andrews, now a Captain, had leisure to read. He studied Shakespeare and Plutarch, and wrote a book, *Hints to Company Officers on Their Military Duties*. After his exchange, he had an opportunity to put his theories into practice. At Vicksburg, he was with the reorganized Third Minnesota Infantry. As Brigadier General, he led a decisive charge at Fitzhugh Woods in 1865. After the end of the war he was in charge of several southern districts. In 1865 he returned to Minnesota and was mustered out.

Andrews resumed his law practice in St. Cloud, was a delegate to the Republican convention which nominated General Grant in 1868, and then became a candidate for Congress. The following year President Grant appointed him Minister to Sweden and Norway. Upon conclusion of his term as Minister, General Andrews changed his residence to St. Paul and took an active part in the affairs of the city. He also continued his interest in forestry. In 1880 he read a report before the St. Paul Chamber of Commerce for memorializing Congress for a grant of land to endow a school of forestry in St. Paul. The memorial and the bill which accompanied Andrews' report were presented in Congress and referred to the Committee on Public Lands. This was the last that was ever heard of them. More than 20 years were to elapse before the establishment of a school of forestry at the University of Minnesota became a reality.

At a forestry congress held in Cincinnati, Ohio, in 1882, General Andrews delivered a paper on forestry. He had continued his studies, writings, and addresses on the subject, but in Minnesota his words made little impression because no one would believe that there would ever be an end to the vast forests of the State, and certainly no shortage of timber for all their needs. Twelve years went by before General Andrews again fought actively for a

forestry system in Minnesota. During the period of 1882 to 1885, he was Consul General at Rio de Janeiro.

Logs and Lumber Deemed Inexhaustible

On December 24, 1880, the St. Paul and Minneapolis Pioneer Press published an article on the immensity of the pine forests in Minnesota. It is given here in order to present the opinion of that day that the forests were practically inexhaustible.

"To the general reader, a brief reference to the country from which the immense crop of pine logs are harvested may be of interest, as comparatively few have any idea of the extent of the great pine forests from which all this lumber is supplied. The pine area tributary to the Mississippi River may be described as a belt of country forming a semi-circle from southeast to northwest, 100 miles wide and nearly 500 miles long, lying wholly upon the east bank of the river for four-fifths of the distance, and about equally on either side of the remaining distance near the head of the stream. The general direction of this belt is an approximation to that of the isothermal line and to the contour of the great lakes lying to the northwest.

"The most valuable strip is on the crest of the great ridge dividing the waters of the St. Lawrence and the Mississippi and rapidly decreasing in quantity and quality as it descends the slope either way. On the south and west, this great belt is bounded by the great, almost treeless agricultural plains that extend from the pineries to the base of the Rocky Mountains.

"Not one-hundredth part of it ever has been, or will be, required by the lumbermen who annually infest the region to carry on the process of denuding the pine forests."



Log drives were once a common sight on Minnesota rivers. This was a scene from Minnesota's last big log drive in 1937 on the Littlefork River, Nett Lake Indian Reservation.

Forestry's Awakening

Until the 1870's, logging and lumbering, not forestry, typified the timber industry. About that time sentiment was in favor of a more sound policy in the utilization of forest land. In 1862, the state timber lands had been broadly divided into pine lands and non-pine lands valuable for timber. The State Land Commissioner could sell pine lands in any manner he wished. The 1877 Legislature, however, provided that pine lands should not be sold in the future until the timber thereon had been estimated, appraised, and sold.

The Tree Bounty Law (Laws 1871, Chap. 30)

The first law pertaining in any way to forestry in Minnesota was the tree bounty law passed in 1871. While the cutting of timber continued in the north, this law provided for the payment of a bounty for the planting of trees on the prairies. Many farm woodlots and windbreaks were thus established. The bounty amounted to \$2.50 per acre for six consecutive years, not exceeding \$25 to any one person in any one year, and excluded railroad companies.

The Minnesota State Forestry Association is Organized

In 1876 a small group of understanding individuals began to impress upon public opinion the need for and the value of a rational program of forest use. Their organization was known as the Minnesota State Forestry Association. While it is inoperative at this time, the Association has not been disbanded.

It was one of the first organizations of its kind in the United States. Throughout the 60 years of its active life, the organization stimulated various groups, among which were the Federation of Women's Clubs, commercial clubs of most cities and villages, newspapers and farm journals, labor organizations, trade unions, sportsmen's clubs, bankers' associations, real estate and development organizations, as well as theaters and churches. Through the Association's efforts, these various groups were unified into collective action.

Establishment of Itasca State Park (Laws 1891, Chap. 56)

In 1891, Itasca State Park was established by an Act of the state Legislature. It included a parcel of land five by seven miles in area, surrounding Lake Itasca, which had been declared the source of the Mississippi River in 1832. Within the boundaries of the park, there was a crazyquilt pattern of various ownerships - lumber companies, land companies, railroad companies and individuals, as well as state and government lands.

Then, on August 3, 1892, Congress granted to Minnesota all government lands within Itasca Park, amounting to 6,956.92 acres. A provision of this

grant was that the land was to be used perpetually as a public state park or it would revert to the United States. The Legislature of 1893 accepted the grant, its terms and stipulations, and provided penalties for destruction of the timber. It was placed under the administration of a board composed of the Governor, the State Auditor, and the Attorney General. The establishment of Itasca State Park constituted the first positive step on the part of the state to preserve a part of its forestry domain. Although a large part of its area had been logged magnificent stands of Norway and white pine remained, and to this day are a reminder of the grandeur of Minnesota's virgin forests.

Forest Fires and The Minnesota Forest Service

Destructive logging methods continued. In the early days the loggers took only the large white pine. Norway pine, followed by jack pine, and the hardwoods came next. Inevitably the logging was followed by fire. Sometimes the cutover lands were burned to protect the remaining stands of timber. Oftentimes the fires were accidental, but whatever the cause, the fires resulted in the destruction of all reproduction and sources of seed.

No one was concerned about the burning of the cutover land. Wasn't it to be converted into farms? Burning was an easy way to clear the land, they reasoned. But very little of the land was ever used for farming. Fires had a way of burning off all the good in the land. No one paid much attention to the disappearance of the forests. Not until sawmills began to be dismantled and logging towns began to dwindle, and the uselessness of the cutover lands began to impress itself on a few thoughtful people.

As early as 1735 there were reports of forest fires. In that year, a Jesuit priest reported fires raging between Grand Portage and Lake of the Woods. Another early explorer in 1807 saw the destruction caused by forest fires but expressed no particular concern. In 1823 fires burned in the vicinity of Sandy Lake. The pioneer attitude was that getting rid of the forest meant development.

The Great Hinckley Forest Fire

On the first day of September, 1894, a blue-gray smoke hung over the village of Hinckley. Brush and stumps in the cutover region surrounding the town had been smoldering and burning unheeded all summer, but no one was much concerned about them. They were accustomed to smoke in the air. There had been so little rain.

But on this Saturday, the smoke became more dense, and by noon it was so dark that lights had to be turned on. People began to get uneasy. Fires which had been smoldering suddenly blazed and raced toward farms and homesteads. Sparks and burning embers set the lumber afire in the mill yard at Hinckley, and the dry swamp to the west of the village was suddenly on fire.

As the wind rose, other fires began to run and the Hinckley fire department raced to put out a dozen fires that were closing in on the town. They quickly realized that the conflagration was beyond control and that the town was doomed. The wind increased to tornadic proportions and uprooted pines as they burned. Fires which destroyed the towns of Brook Park, Pokegama, and Mission Creek converged on Hinckley. About 120 persons who attempted to escape along the Old Post Road to the town of Sandstone did not reach it. Sandstone itself was burned. Of the 130 persons who sought refuge in the swamp near the edge of Hinckley, not one remained alive. Even those who took refuge in the Grindstone River perished as the flames swept over them. Only those who reached the water in the old gravel pit were saved. In desperation people sought refuge in wells and root cellars which turned into death traps. A single well yielded the bodies of 18 suffocated people.

While there were many acts of heroism and sacrifice, the heroes of undying fame were the crews of the trains which saved the lives of hundreds of people by taking them out of the burning town. Two trains coming into Hinckley, one a local freight, the other a passenger train, were coupled together. Since both of them had been heading south, they made the run northward in reverse - three boxcars, five passenger coaches, and a caboose - with a locomotive at each end. The engineers were Ed. Barry and William Best. The train waited in the Hinckley yard until the whole town was burning and then backed away over burning ties and across tottering trestles bringing to safety at Duluth and Superior the 476 refugees it had picked up.

Another train, the St. Paul and Duluth, was due in Hinckley at 4:05 P.M. It was piloted by James Root, a Civil War veteran who had been engineer on General Sherman's train during part of the famous march to the sea. When he saw the army of refugees running up the smoldering track toward the train, he stopped and picked them up and then backed toward Skunk Lake. The explosive force of the fire shattered the cab windows and Engineer Root was badly cut by flying glass. By the time he got the train rolling, fire was racing ahead of it on both sides of the track. He fainted several times, but each time the fireman, Jack McGowan, threw water on him and revived him. The heat was terrific. By the time it reached Skunk Lake, the whole train was on fire and was consumed where it stood. Skunk Lake was not much of a lake, merely a slimy marsh about 18 inches deep, but in it the survivors of the fire found refuge.

Several months after the fire an official list of the dead was published giving the names of the known dead and the number of unidentified who had been buried. The total number of men, women and children who lost their lives in the great Hinckley forest fire was 418.

State Auditor Made Forest Commissioner

The following year, 1895, the Legislature met. General C. C. Andrews used the forest fire that had wiped out the town of Hinckley as the text for an appeal for the public control of forests, for better fire protection, and for restoration of the forests

by careful use. A bill, which was the work of General Andrews and which was modeled upon the New York law, was introduced that provided for the creation of a forest commission to enforce the laws.

The Legislature, however, decided to be economical, although the ravages of fire still were visible in Hinckley, Sandstone, Pokegama, Brook Park, and Mission Creek. The State Auditor was made forest commissioner - without increase in salary - and was authorized to appoint a competent deputy with the title of Chief Fire Warden at a salary of \$1200 per year and with authority to enforce the law that they passed "for the preservation of forests of this state and for the prevention and suppression of forest and prairie fires." (Laws 1895, Chap. 196)

The Chief Fire Warden was also required to investigate the extent of the forests in the State, together with the amounts and varieties of the wood and timber growing therein, the causes of fires, the method used, if any, to promote the regrowth of timber, and any other important facts relating to forest interests as required by the Forest Commissioner.

The law also made the supervisors of towns, the mayors of cities, and the presidents of the village councils fire wardens, with authority to act upon their own motion for the prevention and suppression of fires in their respective jurisdictions and to report to the Chief Fire Warden in St. Paul. Each fire warden received for his services rendered under this act, \$2 per day, two-thirds of which was paid by the county and one-third by the State. Suppression costs were also to be paid in the same ratio.

No fire warden could be paid in any one year for more than ten days' service in extinguishing and preventing forest fires, nor more than five days' service in posting notices or making reports. No person employed by the fire wardens to assist in extinguishing or preventing forest fires could be paid for more than five days of such service in any one year. Counties were limited to an annual expenditure of \$500 under this Act.

The penalty for the malicious setting of a forest fire where there was property of another destroyed or life sacrificed was a fine of not over \$500 or imprisonment in the state prison for a term of not over ten years or both such fine and imprisonment.

Railroad companies were required to equip all their engines with efficient spark arresters and to keep their rights of way clear of all combustible material.

According to this law, the forest fire season was reckoned from the fifteenth of April to the first of November. The amount allowed for forest fire prevention during dry and dangerous periods was \$5,000. Not a cent was provided for permanent employees, outside of the Chief Fire Warden. Township fire wardens were paid only when actually fighting fire. No fire prevention work was possible. The 418 human lives lost in the great Hinckley fire seemed to have been sacrificed in vain. Not many years hence, the short-sighted economy of the Legislature resulted in further tragedy.

General Andrews Appointed Chief Fire Warden

It was a foregone conclusion, of course, that General Andrews would be appointed Chief Fire Warden. His primary duties were to take charge of fire wardens, to instruct them in their duties, and to receive their reports. A force of 1,282 fire wardens was organized the first year. They were none too efficient, but at least it was a beginning. That year there were numerous forest and prairie fires, but there was no loss of life. The total cost of administering the new fire prevention law for the first fiscal year, including the Chief Fire Warden's salary, was \$2,020.

In the regions where there were hundreds of logging camps, thousands of settlers clearing land, mineral prospectors, timber cruisers, and timber thieves, forest preservation was a complex proposition. Adding to the fire danger, there were many miles of logging railroads with poor equipment that set fires in the combustible material strewn along their rights of way. They were slow in complying with the law requiring spark arresters on their engines, and there was no law to compel the disposal of slash resulting from logging operations.

Incomprehensible though it may seem, there was doubt among the people as to whether Minnesota need have any concern about the pine forests in the remote northern part of the State, or about prairie fires that the farmers could suppress by cooperating with their neighbors. During the legislative session of 1897, there was actually an attempt to repeal the Act of 1895. There were even suggestions that the office of Chief Fire Warden had been created as a reward for the "brave old general."

Appropriation Made to the Minnesota State Forestry Association

An appropriation of \$3,000 was made to the Minnesota State Forestry Association by the Legislature of 1897. (Laws 1897, Chap. 329) The Association was a private organization that came into being in 1876. It had struggled valiantly but with not too much success to bring about a forestry program in the State. The appropriation was made for the promotion and encouragement of raising forest trees for planting on open prairies and for forest and water conservation throughout the State. It also provided for the free distribution of forest seeds for trial planting and for the dissemination of information concerning tree planting in general.

In General Andrews' first annual report, he indicated the great extent of Minnesota's forests. He had made careful estimates, compiled from various sources, of the kinds and amounts of timber. He showed an area of 11,890,000 acres of forest lands, and 24,790,575,000 board feet of timber. Of this total, 18,476,475,000 board feet were pine, three-fourths of which was white pine. At this time, the average annual cut of pine for the preceding three years had been 1,500,000,000 board feet. In 1899 it reached a peak of 2,341,619,000 board feet, surpassed only by Michigan and Wisconsin logging.

Andrews estimated that in 20 years practically all of Minnesota's pine would have been cut. He did not propose to prevent its cutting, however. Persons who had lawfully bought the timber or acquired

the land, he reasoned, had a perfect right to cut it as the market demanded. (By 1920 this annual cut had dropped to 576,000,000 board feet, or two-thirds of the state's annual consumption. Between 1837 and 1927 over 75 billion board feet of pine was taken out of the North Woods.)

Restoration was Andrews' next problem, to be solved by scientific and practical forestry. His principles of forestry were: First, forests should occupy only land not suitable for agriculture, such as rocky, hilly, or sandy land; second, a forest should be perennial, its annual cuttings equal to its annual growth; third, forests should be harvested in strips or blocks, so as to promote natural reseeding from neighboring trees; and fourth, a new forest should be planted thick and should be thinned as it grows. He advocated forests also for clothing waste land with beauty, for recreation, and to check runoff of rain and melting snow.

Minnesota State Forestry Board Created

The first forestry board, designated as the Minnesota State Forestry Board, was created by the Legislature of 1899. (Laws 1899, Chap. 214) The Board had nothing to do with the prevention and suppression of forest and prairie fires. Its authority was limited to the development and management of all tracts of state lands *as shall be set aside by the legislature for forestry purposes or granted to the state by the United States government for forestry purposes or which may be given to the state for such purposes by any person.* It also authorized persons who deeded land to the state for such purposes to designate as beneficiary any public educational institution in the State to receive two-thirds of the income derived from the land.

The state Forestry Board consisted of nine members, who were chosen as follows:

The Chief Fire Warden as ex-officio member; the head of the Horticultural Department of the University of Minnesota, as ex-officio member; three persons recommended by the regents of the University, one to be selected on account of his interest in and knowledge of planting, cultivation and preservation of forest trees and prairie groves, one to be selected on account of his interest in and knowledge of the best methods for the preservation of the natural forests of the State and the reforestation of denuded lands, and the third to be selected on account of his interest in and knowledge of the best methods of protecting the source of supply of the several river systems of the State; four persons recommended, one each from the following associations; namely, Minnesota State Forestry Association, Board of Managers of the Minnesota State Agriculture Society, Minnesota Horticultural Society, and State Game and Fish Commission. As a result, the following men were appointed as the first members of the historic Minnesota State Forestry Board:

Captain Judson N. Cross, Minneapolis
Judge Greenleaf Clark, St. Paul
A. L. Cole, Motley
John Cooper, St. Cloud
O. M. Lord, Minnesota City
Judge William Mitchell, Winona
Frederick Weyerhaeuser, St. Paul
General C. C. Andrews, Chief Fire Warden,

as ex-officio member
Samuel B. Green, Head of the Horticultural
Department, University of Minnesota, as
ex-officio member

At the first meeting of the Board, Captain
Judson N. Cross was elected president, Judge Green-
leaf Clark, vice-president, and General C. C. An-
drews, secretary.

Pillsbury Forest Reserve Established

Under the legislative act of 1899, ex-Governor
John S. Pillsbury on November 20, 1900, tendered to
the Minnesota State Forestry Board for forestry pur-
poses, 990.55 acres of cutover pine lands in Cass
County, and it became the first forest reserve to
be established in Minnesota. (Laws 1899, Chap. 214)
The Forestry Board accepted the tender, but Pills-
bury died before he could complete the conveyance
of the land to the State. His widow, Mahala F.
Pillsbury, however, upon acquiring title to the
lands, gave a deed to the State on May 17, 1902, and
designated the University of Minnesota as the bene-
ficiary to receive two-thirds of all income ever to
be derived from the lands.

Pillsbury Land Purchased for Douglas Lodge

In 1901 Attorney General W. B. Douglas negoti-
ated the purchase from J. S. Pillsbury of 250 acres
of pine land fronting on the east arm of Lake Itas-
ca. The price was about \$17,000. At the next meet-
ing of the Legislature, Mr. Douglas recommended the
erection of a new and commodious guest house at the
lower end of the lake for the benefit of visitors.
The building was subsequently erected and became
known as Douglas Lodge.

First Reference to a Forest Policy

In President Cross' address to the Forestry
Board at its meeting in November, 1900, there ap-
pears the first reference to a forest policy, in the
following words:

"We as a board are to be more concerned about
developing the people's forest tracts near their
homes, rather than the large and more extensive
forest parks for their recreation and health,
though these are not to be discouraged, but to be
encouraged, especially around the headwaters of
our water courses and systems, for such forest re-
serves as are especially named in the law creat-
ing this Board.

"We are not to hamper but to facilitate the
lumbering interests, for the lumbermen have pur-
chased the forests for their purposes and it is
one of the greatest industries of the state, em-
ploying thousands of men. We are to try and pro-
long, not to shorten and throw obstacles in the
way of this great and pioneer interest.

"We seek only the crumbs from the lumbermen's
table, the worthless of the cutover lands."

The Legislature of 1901 enacted a law that set
apart certain tax title lands for forestry purposes
and provided for the quieting of title thereto in
the State. (Laws 1901, Chap. 335) It also appro-
priated money for the expenses thereof, but there

are no records that show that the State ever ac-
quired any lands for forestry purposes under this
act.

Another negative act was the one passed in 1903
which authorized the Forestry Board to purchase
lands for forestry purposes at not to exceed \$2.50
per acre, but failed to appropriate any funds to
carry out the act. (Laws 1903, Chap. 134)

First State Tree Nursery Established in 1903

The first state nursery for the production of
forest planting stock was established on the Pills-
bury Forest Reserve following a resolution adopted
by the state Forestry Board at its meeting on April
10, 1903. The minutes of the meeting are recorded
in the handwriting of General Andrews, secretary of
the Board. Although no planting was done that year,
the nursery came into being with the passage of this
resolution.

Work on the nursery was begun in the Fall of
1903. A young homestead settler by the name of Lars
M. Hope, living nearby, offered to prepare the land
at a cost of \$28. The Pine Tree Lumber Company do-
nated 12,000 laths for the necessary screens for the
nursery beds. Mr. Hope built them during the win-
ter months at the rate of 15 cents per hour for his
labor. There was a new baby in the Hope family and
the money would be useful.

The following Spring, 86-1/2 pounds of seed
were planted in the nursery beds. It consisted of
65 pounds of Norway pine seed, 5 pounds of white
spruce, 10 pounds of white pine, 5 pounds of Scotch
pine, and 1-1/2 pounds of jack pine. The Legis-
lature having failed to appropriate any funds for
the establishment of the nursery, as requested by
the Forestry Board, the cost was taken out of the
\$1,000 annual appropriation for the Board's expen-
ses.

That Fall, it was estimated that there were
800,000 thrifty young seedlings growing in the nur-
ery. There is no record of where they were eventu-
ally planted. However, plantations of Scotch pine
were discovered in the area surrounding the nursery
and it is assumed that it is from this pioneer
nursery that the planting stock came. Piles of rot-
ting lath screen and the outline of beds are still
visible. And the little Hope baby mentioned above
is Louis Hope, former assistant area supervisor at
Blackduck, who resigned from the Division of Fores-
try in 1952 to become affiliated with the Oregon
State Parks Service. He was about two months old
when his father prepared the state's first forest
tree nursery under the direction of General Andrews.

Burntside Forest Reserve Established

In 1903 the Forestry Board passed a resolution
to request the Congress of the United States to
grant to the State of Minnesota such of the vacant
public lands of the United States situated in the
State which the field notes of the U. S. Surveyor
showed to be third or fourth rate soil, to be set
aside for state forestry purposes. Some time that
year the United States government indicated that it
was willing to deed to the State a tract of land for
forestry and recreation. After examining several
tracts in different locations, a selection was made

of 20,000 acres of rough, rocky land located north of Ely in St. Louis County. One of the men who assisted in the land examination was William T. Cox of Pope County, then Assistant Forest Expert of the U. S. Bureau of Forestry, Washington, D. C. In 1911 Mr. Cox became Minnesota's first State Forester.

The lands selected were deeded to the State by congressional act on April 28, 1904, with the express provision that the land should be managed for forestry and recreation. The Minnesota Legislature accepted the grant with its terms and conditions in 1905. (Laws 1905, Chap. 83) It became the Burnt-side Reserve.

General Andrews' Title Changed to Forestry Commissioner

General Andrews, as secretary of the Forestry Board, continued working diligently to bring about forest preservation. He openly maneuvered the appointment of valuable citizens to the membership of the Forestry Board. He continually advocated additional land acquisition for Itasca Park. He succeeded in having the General Land Office withdraw from entry the lands which in 1909 by Presidential Proclamation became the nucleus of the Superior National Forest. (Feb. 13, 1909) He is credited with being the father of the "Wilderness Area" within the forests as he recommended making an international park of the Minnesota-Ontario border forest lands as early as 1905. His agitation also resulted in the setting up in 1908 by Congressional Act of the Minnesota National Forest, the name of which was changed to the Chippewa National Forest in 1928. (May 23, 1908; Executive Order No. 4913, June 22, 1928)

The Legislature of 1905 dignified the position of General Andrews by changing his title from Chief Fire Warden to Forestry Commissioner and raising his salary to \$1,500 per year. The burden of his duties increased with the spread of settlement and the extension of lumbering. Although the people living in the forested areas of the State had become aware of the danger of fire, there were still many who deliberately ignored the fire prevention law. Few convictions were obtained, however, as the local fire wardens were reluctant to prosecute their own neighbors. What was needed was an intermediate agency.

Itasca State Park Made Forest Reserve

Itasca State Park, established in 1891, became a state forest reserve in 1907 and was placed under the care and management of the State Forestry Board to be cared for in the same manner as other forest reserves. (Laws 1907, Chap. 90)

School of Forestry Given Use of Tract in Itasca Park

The Board of Regents of the University of Minnesota, in 1907, was given the use of a suitable tract of land in Itasca Park for forest demonstration work in connection with the School of Forestry. General Andrews was ably assisted in publicity and educational work by two University of Minnesota Professors; namely, Samuel B. Green and Edward G. Cheyney. Professor Green was founder and Dean of the University of Minnesota School of Forestry until his death in 1910. He was, without a doubt, a

factor in shaping the sound forest conservation program which Andrews sponsored, since General Andrews called frequently on Green's professional knowledge. Professor Cheyney succeeded Professor Green in promoting sound forestry education through the University.

Governor Made Ex-Officio Member of Forestry Board

The Forestry Board assumed increasing importance and in 1907 the Governor of the State, John A. Johnson, was made an ex-officio member of the Board. (Laws 1907, Chap. 171) Through General Andrews' influence, Governor Johnson was the first governor to advocate forestry in his message to the Legislature.

The Chisholm Forest Fire

In 1908 another town was almost wholly wiped out by a forest fire. On the fourth of September of that year a fire swept over the mining village of Chisholm, which had a population of about 3,000. A strong wind had brought the fire into the village from the northwest, setting slashings afire within the village limits. Fortunately no lives were lost but the fire burned over 20,000 acres and destroyed two million dollars worth of standing timber, besides a tremendous amount of other property.

Forest Fire Prevention Law Strengthened (Laws 1909, Chap. 182)

At the legislative session the following year, 1909, General Andrews urged the Legislature to provide a more effective means of enforcing the fire prevention law. The law was amended, and it authorized the Forestry Commissioner, in case of a "dry and dangerous season," to appoint a corps of forest rangers for the purpose of instructing and assisting local wardens. Their pay was not to exceed \$5 per day with necessary expenses.

The law defined the duties and responsibilities of the Forestry Commissioner in more detail, and provided for dividing the forest area into districts and authorized the employment of forest rangers to manage these districts. It further defined in more detail illegal acts of setting forest or prairie fires and provided penalties therefor under this act and the first legislation dealing directly with the disposal of logging slash was passed. It also provided for railroad companies maintaining patrols on their rights of way through lands liable to be run over by fire.

An amendment to the Constitution of the State of Minnesota was further proposed to exempt lands from taxation for the purpose of encouraging and promoting the planting of useful forest trees thereon. This amendment, however, failed to pass.

General Andrews requested an appropriation of \$20,000 per year, but the Legislature gave him only half of it, with an additional \$2,000 for prosecutions. During the summer of 1909, 24 rangers were appointed; 26 were employed the following year. Their services met expectations. Many fires were checked and some violators of the law were actually convicted. Because of lack of money with which to pay them, they were laid off on September 1, 1910, even though the fire hazard was very great because

of a lack of rainfall. This phrase, "because of lack of money," was to be repeated over and over in the history of forestry in Minnesota.

Cloquet Forest Experiment Station Established

During this same year, 1909, the Cloquet Forest Experiment Station was established in connection with the School of Forestry of the University of Minnesota. (Laws 1909, Chap. 131)

The Baudette-Spooner Forest Fire

In the fall of 1910, 16 years after the great Hinckley forest fire disaster, another forest fire tragedy struck Minnesota. Along Minnesota's northern boundary, many small fires burned during the summer and fall. It was a period of heat and drouth and the driest year in Minnesota on record. On September first, the small handful of rangers had been laid off. On the ninth of October, a terrific wind fanned the small fires into a holocaust and produced another Hinckley disaster. Before the day ended, the towns of Baudette and Spooner on the Rainy River were reduced to ashes. Hundreds of people were saved by trains that ran between flaming forests. A million acres of forest land was burned over. And 42 human beings perished in the fire.

Minnesota Forest Service Established in 1911

The Baudette-Spooner forest fire tragedy tended to strengthen the fire laws of the State. In December of 1910 the Lake States Forest Fire Conference was held in St. Paul for discussion of forest fire prevention and suppression. Fires such as destroyed Hinckley, Chisholm, Baudette, and Spooner were not to be allowed to occur again. As a result of this conference, new laws pertaining to forest fire prevention and suppression were enacted by the Legislature of 1911, although not to the extent advocated by General Andrews. The Legislature of 1911 was requested by Andrews for an appropriation to pay 8,944 persons for fighting the fires of 1910. The amount appropriated, \$94,700, did not cover the entire cost and accounts had to be settled by pro rata payments.

In view of the devastation brought about by the forest fires of 1910, the Forestry Commissioner expected that the Legislature would provide enough money to pay local fire wardens, to extend the ranger service, and to prosecute violators more vigorously. General Andrews therefore prepared a bill which contained all the provisions he thought absolutely necessary for the protection of Minnesota's remaining timber, estimated to be worth a hundred million dollars, of which fifteen million dollars' worth belonged to the State.

The bill called for an appropriation of \$200,000 for hiring rangers and patrolmen, \$35,000 for salaries and expenses of the forestry commissioner's office and local fire wardens, and \$30,000 for prosecution of violators of the fire laws. Under the terms of the bill, railroad companies were to be required to maintain patrol along their lines in timbered or prairie regions from April to November 15. Lumbermen were to be required to burn slashing cut between November 1 and April 1 at the time of cutting, and those cut between April 1 and November 1 were to be burned before the following January.

Persons desiring to camp in the woods were to notify town clerks and promise in writing that they would obey the law regarding campfires.

The bill furthermore proposed that the title of the Forestry Commissioner should be changed to "Forester" and that he should be appointed by the Governor, and that the Governor might also appoint an honor graduate of a forestry school as assistant forester. The bill was the most forward looking document presented for the protection of Minnesota's remaining forests, but once more the State Legislature short-sightedly ignored General Andrews' sound recommendations. Such liberality for forest preservation was unthinkable, and a different bill was considered.

New Forestry Organization Set Up in 1911

New laws enacted by the Legislature of 1911, providing for the preservation of forests in Minnesota and reforestation and for the prevention and suppression of forest fires, replaced practically all previous legislation pertaining to the preservation of forests and set up a new organization. The best points of previous acts were reincorporated in this act, together with other points which materially strengthened it. (Laws 1911, Chap. 125)

All responsibility for the preservation of the forest and the prevention of forest and prairie fires was transferred from the State Auditor and placed under the State Forestry Board -- with the notable exception of state timber. The management of state timber remained under the jurisdiction of the State Auditor.

The Board consisted of nine members, the same as the old board, and was composed of the Director of the Forestry School and the Dean of the Agricultural College of the University and seven others to be appointed by the Governor. Two of these were to be appointed upon the recommendation of the Board of Regents of the University, and one upon the recommendation of each of the following: State Agricultural Society, Horticultural Society, and State Game and Fish Commission. Members of the old Forestry Board in office at the time of the enactment of the law held through the terms for which they were appointed. All members were appointed with reference to their knowledge of and interest in the planting and cultivation of trees in the prairie regions, the preservation of natural forests, the reforestation of denuded lands, and the protection of the sources of streams. Members of the new State Forestry Board were:

Z. D. Scott, President
Prof. E. G. Cheyney, Director of the
School of Forestry, St. Paul
W. B. Douglas, St. Paul (former Attorney General)
John Lind, Minneapolis (former Governor)
H. Oldenburg, Cloquet
J. H. O'Neil, Park Rapids
W. H. Tomlinson, LeSueur
A. G. Wedge, Jr., Bemidji
A. F. Woods, Dean of the College of Agriculture, University of Minnesota, St. Paul
Gen. C. C. Andrews, Secretary, St. Paul (not a member)

Wm. T. Cox Appointed State Forester

The 1911 act authorized the Forestry Board to appoint as State Forester a technically trained forester, who would have power to appoint an assistant forester and other needed employees, subject to the approval of the Board. (Laws 1911, Chap. 125) William T. Cox was appointed Minnesota's first State Forester, effective on May 1, 1911. Dillon P. Tierney was made assistant forester.

Provision was also made in the act for the appointment of a secretary for the Board at a salary of not more than \$1,800. General Andrews was 82 years old at the time, but he showed no signs of aging and felt himself as competent as ever. When the position of secretary was offered to him he accepted it graciously and discharged his duties with great fidelity. By that time he had been in the forest service of the State, conducting extensive administration, for 26 years. A Harvard lawyer, with a creditable diplomatic and military career, he preferred to devote his energies and his life to the service of forestry in Minnesota rather than to accumulate a fortune in another field. He was a very active man, physically, all his life of nearly 93 years, and he made frequent trips throughout all of Minnesota, which often involved travel on foot or by canoe.

General Andrews took much pride in his part in the establishment of Minnesota's forests, but his services in the cause of forestry were appreciated by only a few of his contemporaries. His generation looked upon forests as superfluous timber which had to be cut down. As he predicted, the magnificent virgin pine forests of Minnesota had largely disappeared by the time of his death in 1922, and lumber was being imported from the Pacific Coast states.

District Rangers Appointed

Mr. Cox proceeded to organize the state forest protection system, a system which is functioning along practically identical lines today, and a pattern which was copied by many of the other states. An organization of staunch woodsmen designated as district rangers was set up, under whom worked both state and federal fire patrolmen, the latter being paid from a \$10,000 grant under the Weeks Act of 1911 made to the State by the federal government for the protection of the headwaters of navigable streams. (1911 March 1, 36 Stats. P. 961)

The fire prevention program included the coordination of fire control activities of the State, the federal government, lumber companies, railroads and citizens of the forested areas of the State. The work included firebreak construction, slash disposal, railway fire prevention, and the development of permanent improvements, such as roads and trails, lookout towers, ranger cabins and telephone lines, to be used in the prevention and suppression of forest fires. Three hundred dollars was the amount allotted to each of the 20 ranger districts for use in cabin and lookout tower construction in 1911. Rangers and patrolmen constructed 92 wooden towers, 13 steel lookout towers and 8 cabins at a total cost of \$3,587.52.

State Forester Cox also conducted an extensive reconnaissance of the state's forest lands to deter-

mine the extent of the timber, as well as soil classification. The fire protection organization showed favorable results with a reduction in fire losses and acreage burned.

Mr. Cox was interested not only in the protection and development of the forests of Minnesota, but in the wildlife of the State as well. It was during his regime that a herd of elk obtained from the Jackson Hole country in Wyoming was introduced into Minnesota at Itasca State Park. In 1913, the Minnesota Legislature, upon Mr. Cox's recommendations, had appropriated \$5,000 for "securing, transporting and maintaining a herd of elk in Itasca Park." The hope was that if the nucleus of a herd could be established in captivity, transplants could be made from there, and the animals given an opportunity to establish themselves again in the State. After many setbacks, the elk did become established and were released in the Red Lake area of northern Minnesota.

From the beginning of the Minnesota Forest Service, Mr. Cox saw to it that a merit system of appointing employees was practiced. The original appointments were based on an examination given by the State Forester. The first examination given for patrolmen was oral and was conducted by Mr. Tierney, assistant state forester, in May, 1911. The first written examination was held in various places throughout the northern part of the State and in the senate chamber of the State Capitol in March the following year.

Three years later, another examination was given for fire patrolmen and an eligible list set up, based upon results of the examination. There was a persistent endeavor to set up a merit system among rangers and patrolmen long before a state civil service system was established. It has been traditional throughout the years that appointment to the forest service is always on a merit and fitness basis.

The personnel of the Minnesota Forest Service following its organization in 1911 consisted of the following persons:

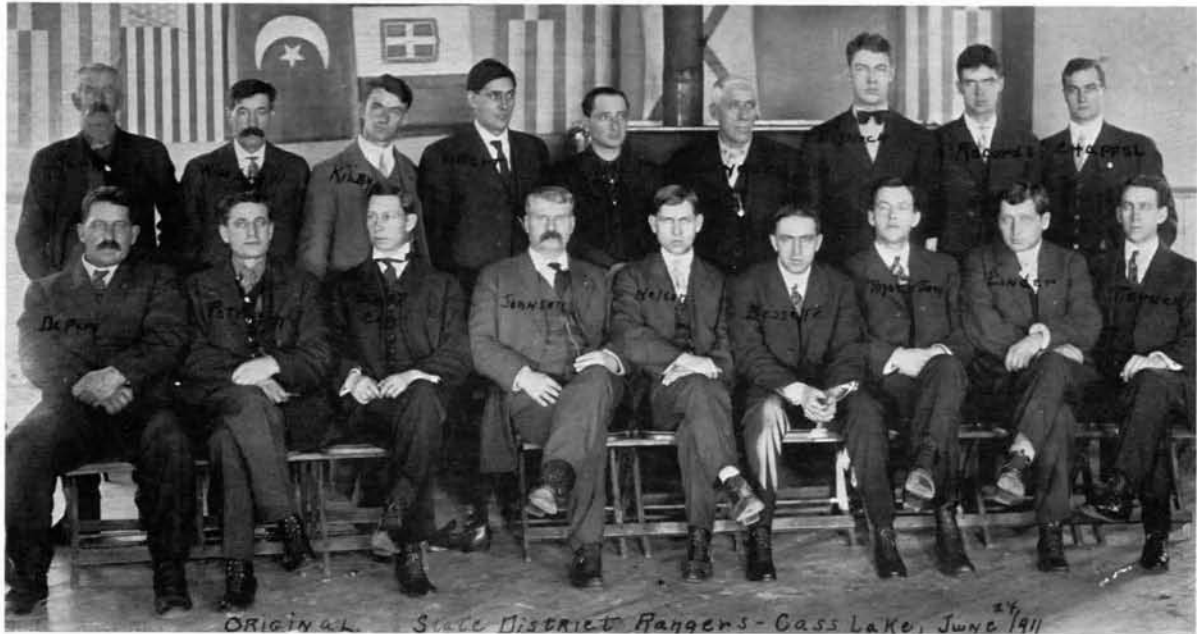
Office of the State Forester

William T. Cox	- State Forester
Dillon P. Tierney	- Ass't State Forester
Phil H. Hanson	- Clerk
Clifford A. Laflin	- Draftsman
Anna Gillespie	- Stenographer
Esther Bergstrand	- Stenographer

Field Force - District Rangers

Walter Eisenach-Aitkin	Percy Records-St. Paul
Hugo C. Nelson-Hibbing	H. H. Winslow-Northome
J. P. Saunders-Brainerd	L. F. Johnson-Bemidji
E. Arthur Linder-Warroad	Edgar E. Chappel-Ely
Hans Kasper-Grand Marais	Fred W. Bessette-Orr
A. C. DePuy-Park Rapids	William Kilby-Baudette
C. A. Peterson-Int'l Falls	Percy Vibert-Cloquet
Michael J. Thornton-Deer River	Arthur Gibbs-Tower
John O'Connor-Detroit Lakes	

One of the forest patrolmen appointed in July of 1911 was Mike Guthrie. He was stationed at Swan River. In 1962 he retired as Regional Forester with headquarters at Deer River. At the time of



These Men were the Minnesota Forest Service's First District Rangers.

his retirement, he was the only field man appointed in 1911 who was still in the service. In 1952 he received the outstanding-man-of-the-year honor award, an award given annually to the employee chosen by a committee from nominations made by the field personnel "for distinguished accomplishments in the perpetuation of Minnesota's forests, for outstanding achievements in the development of our forest resources, and for recognition that forests as a basic resource are a public trust."

Clifford A. Laflin, draftsman, appointed in 1911, also illustrated the monthly publication of the Forestry Board and the Forest Service, called "The North Woods." It was edited by Prof. E. G. Cheyney and was published until 1919. The issues are now of historic value.

Phil H. Hanson, appointed clerk of the Forest Service in 1911, became executive assistant to the Director of the Division of Forestry, a position he held until his death in 1943.

Railway Fire Prevention

Wm. M. Byrne was appointed in 1912 as railway fire protection inspector. Railroad companies were required by an amendment to the 1911 law to take more precautions with their ash pan and spark arresting devices on locomotives than had previously been the case. Wm. M. Byrne was the pioneer in establishing locomotive inspection and an elaborate system of patrol after trains during hazardous periods. He was in charge of railway fire prevention until his retirement in 1949. It was necessary for him to develop the laws covering the design and maintenance of spark arresting devices, to inspect locomotives and portable engines, to devise the system of railroad patrol, to see that rights of way were kept clear of combustible material, to issue speeder permits, and to check on fires of railroad origin. The system became efficient and self-operating under Mr. Byrne's supervision.

Other Appointments

Arthur F. Oppel, a graduate of the School of Forestry, University of Minnesota, was appointed in 1912 and placed in charge of reconnaissance work. Mr. Oppel became deputy director and eventually assistant to the Director in charge of special projects. At the time of his retirement in 1956, he was engaged in the control of forest insects and disease.

Anson E. Pimley was also appointed in 1912. He began his career as a forest patrolman in the Park Rapids district. From 1921 until his retirement in 1956, he was in charge of fire control for the Division of Forestry and had a great deal to do with the development of fire prevention and protection techniques, fire fighting methods, and the general organization of forest fire control.

It may be said that the infant organization was a closely knit one for it was not long before the two stenographers, Anna Gillespie and Esther Bergstrand, became Mrs. Wm. R. Byrne and Mrs. Arthur F. Oppel.

Two other field men appointed in 1912 who became district rangers in time were such outstanding personalities that they deserve mention here. One was Perry W. Swedberg of Moose Lake and the other was Patrick J. Bayle of Grand Marais. The latter was known far and wide as "Paddy" Bayle, an expert in fire control work in the "canoe country" of northeastern Minnesota. Both men left an indelible imprint on the Forest Service.

P. J. Bayle left the Forest Service to become Sheriff of Cook County. In 1954, his 78th year, he died of injuries suffered in an airplane accident which occurred several years before. Perry Swedberg retired in 1944 and moved to Gresham, Oregon, where he lived until his death.

It has always been claimed that there existed an "esprit de corps" in the Forest Service such as existed nowhere else to the same degree. This is manifested in the following note written by Perry Swedberg upon his retirement:

"The day before Christmas Eve I received in the mail a neat little package containing a beautiful little timepiece on the back of which was inscribed: 'To Perry from the gang in the M.F.S.' As I sat in silent reverie my thoughts wandered back when it was my privilege to be with this gang - my gang in the M.F.S., scattered out all over northern Minnesota, and whose initiative and devotion to duty made history and changed the course of events in the world in which they labored. Was there ever a finer gang? No! True comrades always, and real men for whom no one ever had to apologize. I am happy to have been one of you -- happy to be remembered in such an impressive way. . ."

Forest Reserves Become State Forests

At the next session of the Legislature, 1913, a number of important laws were enacted. State forests came into being, the term "forest reserve" having been changed to "state forest." (Laws 1913, Chap. 86)

Laws relating to the disposal of logging slash were also strengthened.

The establishment of municipal forests was authorized and provisions made for levying of a tax therefor. (Laws 1913, Chap. 211)

Forester Made Member of Timber Board

The 1913 session of the Legislature also made the State Forester a member of the Board of Timber Commissioners, which was composed of the Governor, the State Treasurer, the State Auditor, and the Attorney General, with the addition now of the State Forester. (Laws 1913, Chap. 383)

At this time, the State Auditor continued to sell timber on state lands, with the approval of the Timber Board. The jurisdiction applied only to general state public land which had not been set apart as state forest reserves.

The same Legislature authorized the issuance of certificates of indebtedness in the amount of \$250,000 for the purchase by the State Forestry Board of all private lands within the boundaries of Itasca State Park. (Laws 1913, Chap. 531) This provided an important addition to the park.

The 1917 Legislature passed a law providing for the establishment of state forests composed of trees suitable for use in paper making and for the reservation of water power lands liable to be overflowed by the improvement of such water power, and other lands suitable for producing wood to be used in the manufacture of paper, and for the leasing of such powers. (Laws 1917, Chap. 360) However, no lands were ever acquired under this act for such purposes.

An amendment to the State Constitution was al-

so proposed providing for the payment of bounties to encourage planting and cultivation and protection of forest trees, but it failed to pass.

Constitutional Amendment Sets Aside Trust Fund Land as State Forests

An amendment to the constitution of the State providing for authorization to set aside state trust fund lands as state forests was passed in 1914 by the people of Minnesota, and it became Section 7 of Article VIII of the State Constitution, reading as follows:

"Such of the school and other public lands of the state as are better adapted for the production of timber than for agriculture, may be set apart as state school forests, or other state forests, as the legislature may provide, and the legislature may provide for the management of the same on forestry principles. The net revenue therefrom shall be used for the purposes for which the lands were granted to the state."

This amendment was a great forward step in the establishment of a state forest system in Minnesota.

Minnesota State Forests

Under provisions of the new constitutional amendment adopted in 1914, some 350,000 acres of state-owned lands in northern St. Louis, Lake, and Cook counties were established by the 1917 Legislature as state forests. (Laws 1917, Chap. 448) The lands, to a large extent, were widely scattered and not in a contiguous body. They became the Minnesota State Forests.

Tree Planting Begun

The first extensive tree planting work was undertaken in 1914. Wild stock dug up in the woods, consisting of 65,000 trees of various species, and 725,000 trees of nursery stock, were planted on various types of land. The planting was mainly an experiment, therefore a variety of trees was selected, taking into consideration the soil, ground cover, topography, and slash conditions. Some of the land had been cut over recently, while some had been burned over at least 25 years previously. The following year the first planting was done on the Burntside State Forest, when 200,000 three-year-old transplants were planted. The experiment was not too successful as the transplants were badly damaged by deer and moose.

The Cloquet-Moose Lake Forest Fire of 1918

With favorable weather conditions, the State Forest Service showed good results in spite of meager appropriations. Then the drouth years of 1917 and 1918 came along. At this time there were 31 million acres in need of some type of fire protection, 20 million acres of which needed intensive protection.

With many of the experienced men in the army, the country being at war, an organization composed of 13 district rangers and 35 patrolmen, even with superhuman efforts, could not conceivably carry out the fire protection assignment under adverse weather conditions and with a meager appropriation of funds.



Ruins of Cloquet, Minnesota, after the Devastating Forest Fire of 1918.

Although they were assisted at times by several hundred railroad patrolmen, township patrolmen, and lumber company rangers, an annual appropriation of \$50,000 was but a drop in the bucket. The drainage of peat bogs, land clearing, and war-time logging had left a tremendous fire hazard in the forest areas of the State. More than a million acres were burned over in 1917. Then in 1918 there occurred another frightful forest fire which will remain forever a black spot in Minnesota's history.

The morning of Saturday, October 12, 1918, was bright and clear. By noon, however, there was considerable smoke in the sky and the sun was a blood-red ball. A great many small fires had been burning throughout the forest area. The summer and fall had been terribly dry, and the temperature unusually high. All that was needed to complete the ingredients for a major disaster was a high wind. On October 12, it came. Before another day dawned, a hurricane of fire had wiped out the thriving towns of Cloquet and Moose Lake and the smaller villages and settlements of Kettle River, Lawler, Adolph, Munger, Five Corners, Harney, Grand Lake, Maple Grove, Twig, Barnum, Matthew, Atkinson, French River, Clifton, Brookston, Brevator, Pike Lake, Pine Hill, Kalevala, Ronald, Salo, Split Rock, Automba, McGregor, and Warba, and even threatened the destruction of the city of Duluth. The property damage was in excess of \$28,000,000, and 438 human beings - men, women, and children - were burned to death or died of suffocation.

Cloquet had been a city with a population of 9,000 people. The devastation wrought was beyond

description. Practically every building was burned to the ground. The residents owed their lives in measure to the action of Ranger Percy Vibert who recognized the danger to the town in the early afternoon. Through his efforts, the Great Northern Railroad brought in and held in readiness four long trains at the depot. Towards evening it was realized that the town was doomed and the people rapidly boarded the trains. Several thousand escaped to Carlton by automobile. Had it not been for the fact that the trains were there, the loss of life in the little city would have reached an enormous figure.

Ranger Vibert had had patrols out in various directions during the afternoon with whom he kept in contact, and when they realized that the town would go, the fire siren sounded the alarm and all the bells and whistles in town gave warning. Vibert went from place to place and ordered the people to leave. They streamed to the depot where the trains, composed of flatcars, boxcars, and gondolas, were waiting to take them out of the fire area. Cloquet burned to the ground about 7 o'clock in the evening.

In Duluth at 3 o'clock in the afternoon the sun was obscured by smoke. By 4:30 the sky had become so darkened that it was necessary to turn on the street lights. The fires had come close to the outskirts of the city of Duluth. The city fire department was there, holding the fire back from the suburbs. By 7:30 in the evening the wind was very strong. That night it rose to 76 miles an hour. Things looked very serious for the safety of the people of Duluth. Fires occurred at the Canadian Northern lumber docks and in the Alger-Smith lumber

yards. The Woodruff lumber yards were consumed. The Duluth end of the inter-state bridge was wiped out. Many other fires occurred. All firemen and policemen in the city were called to duty.

Early in the evening the Home Guard and the Motor Corps were mobilized. Every automobile in the city was impressed into service. All speed limits were abolished. Detachments of the Home Guard were sent to nearby towns to assist in rescue work. Others were detailed to secure bedding, cots, clothing and medicine, which were placed in the armory and other public buildings in readiness for the refugees which were being brought in by automobile and expected by train. The Red Cross turned out in full force and did a wonderful job of caring for the injured and in making the thousands of homeless and penniless refugees comfortable.

By midnight communication with the outside by telephone and telegraph was practically an impossibility. Wild rumors were frequent. A town would be reported burning, and in a little while it would be reported as not having been touched. But when the refugee trains began to arrive at 2 o'clock in the morning it was learned that very few of the reports were exaggerated. The hospitals in Duluth and in the neighboring city of Superior, Wisconsin, were soon filled with the sick, injured, and burned refugees. On the faces of many the horror of their experience was plainly to be seen.

Although nearly every automobile and truck had been in service almost continuously during the night at 7 o'clock on Sunday morning there were hundreds of cars at the Duluth armory ready for assignment to whatever needed to be done. Passenger cars were sent in every direction to bring in any of the living to be found in the areas, and to bring food and clothing to others who had found shelter.

Trucks picked up the bodies of those who had perished along the roads. Many had attempted to escape in wagons and were overtaken by the flames. A great number of automobiles were also destroyed because of the desperate speed at which people tried to escape from the fire - through smoke so dense they could not see. At curves in the roads the cars piled up and were wrecked and then burned. More than a hundred people lost their lives in this way. One such curve, near Moose Lake, became known as Death Curve.

A great deal of livestock was destroyed. A census was taken of burned cattle which could be saved by treatment. Livestock that was not confined in barns escaped alive. However, a great number required treatment for burns. Horses which were not killed by the fire seemed to escape entirely unharmed, presumably because they were fleet of foot than the cattle.

There was a greater loss of life in the area surrounding the town of Moose Lake than in any other portion of the fire area. The Moose Lake region was put under martial law, and the Home Guard, as well as the National Guard, were used for fire fighting in addition to the rescue and relief work.

Ranger Perry W. Swedberg, whose home and station were in Moose Lake, was on duty. Other rangers were called down from the northern part of the State to render assistance. State Forester Wm. T. Cox es-

tablished headquarters there immediately after the fire and made a tour of the various burned districts. Fires continued to be serious in the vicinity of Moose Lake.

Bodies of the dead, some of whom had suffocated and others charred to a crisp, were brought in from everywhere by heroic relief workers. Bodies were heaped in three temporary morgues where the center of the town had been. Late on Monday, October 14, relief workers dug a long trench for the burial of fire victims. A monument stands there today in their memory.

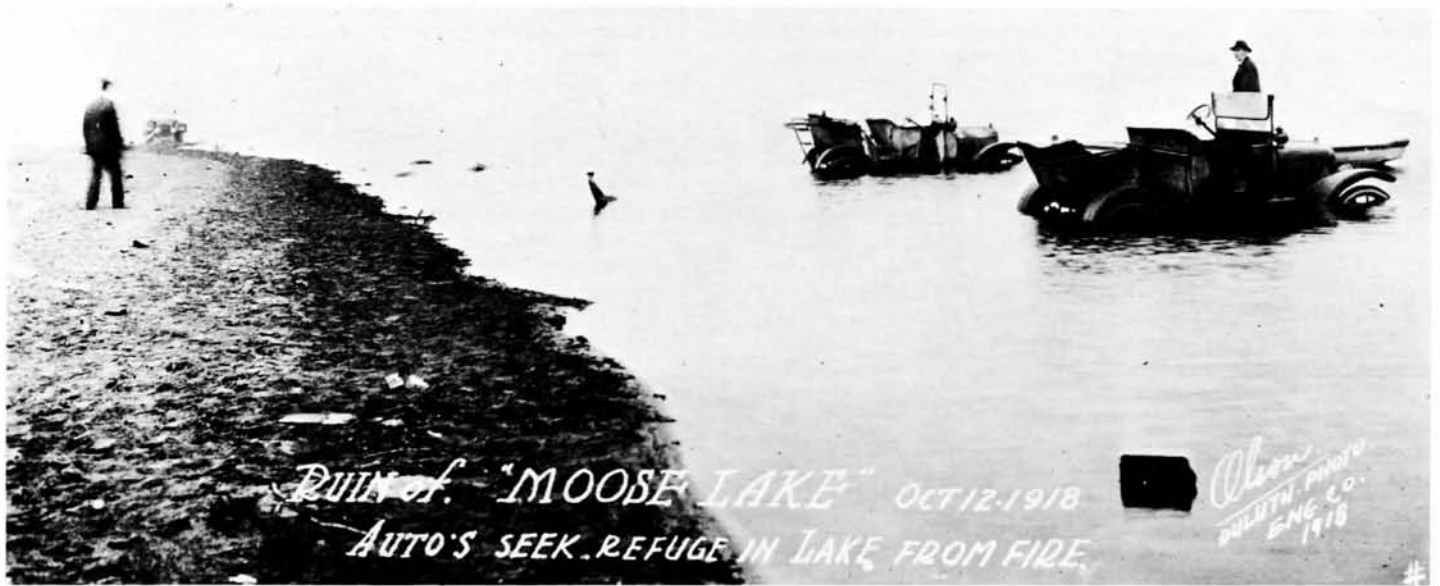
Burial squads worked day and night in removing and interring the bodies of the fire victims. Many were burned beyond recognition and these were put in rough board coffins and buried on the spot in hastily dug pits. Although the loss of life was heaviest near Moose Lake, there were many instances of miraculous escapes from death as families saved themselves in water holes, gravel pits filled with water, and in Moose Lake itself.

At first it was believed that one great fire caused all the devastation, but it was found that there were at least six distinct strips burned over, each without any connection with the others. Because a great many fires of railroad origin had been burning in the fire area, with no heed paid to the warning of the State Forest Service, and because the railroads were under government control during these war years, a large number of claims were made against the federal government. It has been said that inflated claims by unscrupulous and unprincipled persons amounted to \$250,000,000. The settlers and fire sufferers received only a small percentage of this.

The drainage of swamplands also came in for a great deal of criticism. An almost entire lack of precipitation during the preceding year, of course, added to the extreme fire hazard. The State Forest Service escaped the blame for the disaster on the part of the public. A statement issued by State Forester Cox to the Associated Press placed the blame squarely on the Legislature because of the wholly inadequate appropriations for fire protection and fire suppression work.

State expenditures resulting from the 1918 forest fires amounted to a total of \$1,717,895, of which \$179,946 was spent by the Adjutant General, \$301,381 by the Safety Commission, \$1,200,025 by the Board of Relief, and \$36,543 appropriated for payment of fire fighters. If a reasonable portion of these expenditures after the fires occurred had been provided for protection and suppression work, the persons who perished in the fires might have been spared a horrible death.

Even this tragic demonstration of the need for more funds for adequate fire protection for Minnesota's forest areas apparently made little impression on the following Legislature. Even the very minimum required was not appropriated. In the 1918 report of the State Forestry Board it recommended an appropriation of \$330,000 as the very least that would be needed to prevent a repetition of the Hinckley, the Baudette-Spooner, and the Moose Lake-Cloquet disasters. The amount appropriated by the Legislature was \$85,000 - about one-fourth the amount requested.



Automobile Drivers Seek Refuge from Moose Lake Fire by Driving into Lake.



Ruins of Moose Lake Forest Fire, October 12, 1918.



"Death Curve" near Moose Lake; Not One, but Six Fires Ravaged the Moose Lake Area.

The Burning Permit Law Enacted

One of the most important forestry laws enacted up to this time was the burning permit law, which was passed by the Legislature of 1919. (Spec. Session Laws 1919, Chap. 32) This law regulated the time of starting and the conditions under which open fires would be permitted in certain portions of the State. It also provided for the issuance of permits to start fires in certain cases. Up until now, anyone could start a fire wherever and whenever he felt so inclined, regardless of the fire hazard.

Fire Cooperation

During the 1919 fire season the situation again became so critical that the special session of the Legislature which convened in September of that year was prevailed upon to provide an appropriation of \$500,000 to a newly created State Board of Relief. Part of the fund was to be made available for forest fire protection. In 1920 the Board of Relief contributed nearly \$40,000 out of this fund for hiring of additional fire patrolmen. (Spec. Session Laws 1919, Chap. 35)

It was another critical fire year and threatened to equal 1918 in destructiveness. Everyone was impressed with the seriousness of the situation. Cooperation hitherto unknown became the order of the day. Railroads, lumber companies, mining companies, all cooperated with local, state, and federal governments. Several hundred townships levied a special tax which raised \$142,000 for the employment of local fire patrolmen. Fire patrolman commissions were accepted by more than 500 town board chairmen. Railroads employed 98 fire patrolmen and spent \$100,000 for fire control. Mining and lumbering companies spent equally large sums of money. The federal government provided an additional \$8,000 under the Weeks Law for fire protection of watersheds of navigable streams. (1911, 36 Stats. P. 961) Lands in national forests and Indian reservations were given fire protection by the U. S. Forest Service and the U. S. Indian Service.

In spite of the efforts and expenditures of money by many and varied agencies and thousands of volunteers, fire protection again proved inadequate, due perhaps to the lack of coordination. During the years 1922 and 1923 a million acres were burned over with a loss of more than \$3,000,000. The state fire protection organization still consisted only of 15 district rangers, 55 regular fire patrolmen, and 51 temporary patrolmen.

The airplane was used for the first time in fire fighting work in 1922. In that year National Guard planes were used for fire reconnaissance. Later on seaplanes were to be used extensively, particularly in the lakes country, as in northeastern Minnesota.

In spite of the continual lack of funds with which it was hampered and hamstrung, the State Forest Service - although its foundations were laid on tragic footings - was soundly organized and its accomplishments were many. A fire protection system had been established. Sound basic forestry legislation had been enacted. The promotion of forestry had been secured by the creation of state forests. Provision had been made in the management of state-

owned timber for maximum production, as well as maintenance of recreational and scenic assets.

Permanent improvements completed since the establishment of the State Forest Service included 34 steel lookout towers, 16 cabins, 4 ranger stations, and 11 warehouses, in addition to hundreds of miles of trails through the forest area, portages, fire-breaks, and telephone lines. The very first steel lookout tower, an 80-foot, 3-post tower, with an open crow's nest, was the Cascade Tower. It was built on the ground by a crew composed of P.J. Bayle, A.K. Anderson, O.M. Eckbeck, Gus Peterson and Bill Tunmore. The completed tower was then raised with a ginpole and a hand winch and set in holes previously dug in the ground. The date was June 10, 1922.

Most important of all was the trained organization of field men. Though sadly underpaid, and often having to take further cuts in pay during the winter months, they considered their jobs as careers. Their devotion to the Forest Service in spite of lack of sufficient funds, long hours of hard work with insufficient equipment, thinly spread over a vast protection area, testified to the career idea that has been instilled in them.

Lands Reserved Along Lakeshores

All state lands bordering or adjacent to meandered lakes or other public waters and the timber thereon were withdrawn from sale by a law passed in 1923, (Laws 1923, Chap. 430), and a strip 100 feet wide was reserved for public travel along lakeshores. In 1927 the law was amended to decrease the width of the strip reserved along lakeshores or water courses for public travel from 100 feet to 2 rods. (Laws 1927, Chap. 320)

Wm. T. Cox, State Forester, Dismissed

In 1924 Wm. T. Cox was dismissed as State Forester by Governor J. A. O. Preus, through the Forestry Board. During his entire term of office Mr. Cox had been critical of the divided jurisdiction over state timber lands. (It is a matter of record that as early as 1873, and again 20 years later, there had been Senate investigations of the State Auditor's methods of handling state timber.)

Both Mr. Cox, as State Forester, and the State Auditor, as land commissioner, were members of the State Timber Board. However, the State Auditor had charge of the timber on state lands. Mr. Cox advocated putting restrictions on the sale of state timber. Mr. Preus, State Auditor, recommended clear cutting. When Mr. Preus became Governor, appointments to the Forestry Board were arranged so that Mr. Cox was dismissed.

In Mr. Cox's last published annual report, for 1922, he had some sound, long-term recommendations. He recommended an appropriation of \$415,000 for the job of fire protection and reforestation; he advocated the consolidation of state forests and the establishment of additional ones; he urged the use of tax-delinquent lands for forestry purposes, and a more equitable system of forest taxation; he suggested that extensive drainage of forest areas be restricted; and he boldly recommended that the State Forester be empowered to prescribe regulations regarding the sale of timber of the State. All of his recommendations made up a sound policy for the management of the State's forests.

Grover M. Conzet Appointed State Forester

Upon the dismissal of Mr. Cox in 1924, Grover M. Conzet, assistant state forester at the time, was appointed State Forester. He had been with the Forest Service since 1914. He graduated from the University of Minnesota, School of Forestry, in 1912 with a B.S. degree, and in 1913 obtained his M.S. degree in forestry. His work with the Forest Service included forest protection and fire suppression duties, as well as timber studies and silvicultural investigations. Fire protection had been one of the most important phases of forestry work for many years, and to Mr. Conzet should go the credit for the development of fire fighting equipment, methods and techniques, the perfecting of the fire protection laws, and the establishment of many of the state forests.

Mr. Conzet designed and developed many types of fire fighting equipment, including pump trucks and the so-called "GMC" backpack pump tank, which came to be used all over the country. The "peat nozzle" used in fighting peat fires in Minnesota's vast peat areas was also developed by him. The familiar tepee sign, posted along highways and roadsides by the Forest Service for many years, was designed by him.

Under his supervision the organization set up by Mr. Cox was built up and developed into a smoothly coordinated forest and fire protection agency. The forest laws, particularly as they pertain to fire protection, were largely developed under Mr. Conzet's direction and stimulus. With minor amendments, and with the exception of new laws required as the scope of the organization widened, these are the forest laws under which the Division of Forestry operates today.

Clarke-McNary Law Aids State

In 1924 the federal government had enacted the Clarke-McNary law by congressional act. It provided the State with increased funds for fire prevention work, and has continued to provide substantial assistance to the present time. On July 15, 1925, Grover M. Conzet, State Forester, signed the Clarke-McNary agreement, and on October 19, 1925, it was signed by the Acting Secretary of Agriculture, C.V. Marvin, at Washington, D.C.

Fire Protection Problems

Fire protection problems and serious fire losses, together with insufficient appropriations, continued to plague the State Forest Service. Serious fires occurred in 1925 and 1926. Fire fighting vouchers prepared in the field for the payment of fire fighters - who were paid at the rate of 15¢ an hour - were of such volume that they were sent to the St. Paul office in cartons and wooden apple crates. In 1925 fire damage in the amount of over a million dollars occurred when fires burned over a third of a million acres.

Under Mr. Conzet's direction, efforts constantly were made to improve the efficiency of the personnel. An annual intensive training course was introduced in 1926 for the field men.

Although an attempt was made to give them year-

around employment, it continued to be necessary to lay off a good percentage of the men for the winter months, or to continue them at a reduced rate of pay as low as \$60 a month. Salaries for fire patrolmen ranged from \$80 to \$100 a month, and for district rangers from \$125 to \$150. Even with the low salaries and the annual lay-offs, the men took pride in being members of the Forest Service and developed an esprit de corps that held the organization together through trials and tough going. At this time there were but eight college trained foresters in the organization.

Forest Laws Codified

Forest Area Defined

All existing laws pertaining to forestry and forest fires were codified, revised, and supplemented by the Legislature of 1925. (Laws 1925, Chap. 407) All forestry acts were confined by this law to the forest area. The forest area is defined as "every county now or hereafter having within its boundaries any tract or area of 1,000 or more contiguous acres of standing or growing timber or unbroken prairie land or of cut-over timber land not cleared or otherwise denuded of combustible or inflammable material." Roughly, this was an area of 31 million acres of which 20 million acres were under intensive fire protection by the state forestry organization.

Constitutional Amendment Adopted

Another piece of important legislation passed in 1925 was an amendment to the Constitution authorizing the enactment of laws to encourage and promote "forestation and reforestation" of lands in the State and providing for a special tax. (Laws 1925, Chap. 427) This was the second time the amendment had been submitted to the electorate. It was adopted at the general election in 1926. At the 1927 legislative session it resulted in the passage of the auxiliary forest law.

First Conservation Commission

The so-called "reorganization act" of the State government was passed in 1925. (Laws 1925, Chap. 426) Under this act the Board of Timber Commissioners, the State Forestry Board, and the office of State Forester were abolished. The powers and duties of the State Forestry Board and the State Forester were conferred upon the Commissioner of Forestry and Fire Prevention, who was appointed by the Governor for a term of two years. Grover M. Conzet, State Forester, was retained as Commissioner.

First Department of Conservation

Under this act the first Department of Conservation, under the control of a Conservation Commissioner, was created. It consisted of the Commissioner of Forestry and Fire Prevention, who was made chairman by law, the Commissioner of Game and Fish, and the State Auditor as ex-officio Commissioner of Lands and Timber. The State Auditor thus retained control of state lands and timber. The controversy

between the forester and the state auditor regarding the management and ill-advised sale of state timber continued, and it was during this period that Mr. Conzet made the statement which became famous, "Let the silent stumps tell their story."

The Department of Conservation under the new act had the care, improvement, supervision, control and management of all state parks and state public campgrounds, and exercised all the rights, powers, and duties vested in the State Auditor, the State Forestry Board, and the State Forester insofar as they applied to parks, campgrounds, and monument sites, as well as certain state lands withdrawn from sale.

The Department of Conservation was also empowered to recommend to the State Auditor the withdrawal from sale of such state lands as the majority of the commission in its judgment found desirable for the purpose of reforestation and timber reserves and preservation of water power sites and other public purposes. In spite of this opportunity, very little state land was acquired for state forests under this act.

First Law Regulating the Cutting of Christmas Trees

The passage of the first law for the regulation of the cutting of Christmas trees to stop the promiscuous trespass cutting of such trees took place in 1927. (Laws 1927, Chap. 10) It prohibited the cutting and removal and transportation for decorative purposes of all growing pine, cedar, evergreen or coniferous trees without the written consent of the owner of the land on which the trees were growing.

Brook Trout Season Opening Delayed

Because of the prevalence of fires during the brook trout fishing season caused by fishermen - 30,000 acres along the Manitou, Caribou and Baptism rivers on the North Shore of Lake Superior having been burned over in 1926 - the opening of the brook trout fishing season was changed from April 15 to May 25 in Lake and Cook counties. This delayed opening of the season aided in fire prevention. (Laws 1927, Chap. 64)

Fire Cooperation

Lumber companies being aware of the dire need for fire prevention if they were to continue in business, expended nearly \$40,000 for fire protection and suppression annually. Several companies assumed all protection work in certain areas, under the supervision of the Forest Service. Others paid directly for a definite number of men who worked in designated areas. Other cooperators were the Cloquet Valley Association, the Wales Forest Protective Association, the Koochiching Patrol Association, the Kabetogama Patrol Association, the Nett Lake District Patrol, and several smaller organizations. The Oliver Iron Mining Company also provided its own rangers and fire fighting, detection, and suppression equipment, including lookout towers and telephone lines.

In spite of the efficiency of the fire protection organization and its cooperators, serious fires continued to menace the forests. An unprecedented drouth in the early 1930's increased the fire hazard

and proved once more that the Forest Service was still undermanned and its appropriations wholly inadequate to cope with the gigantic problem of preventing and suppressing fires on the millions of acres of forest land. The year 1931 saw the burning over of nearly a million acres, with damage amounting to three and one-half million dollars.

Minnesota Reforestation Commission Appointed

The Legislature of 1927 became convinced of the need for making a study with regard to afforestation and reforestation of lands, delinquent taxes, and county finances in the forest area of the State. An interim committee of the Legislature, known as the Minnesota Reforestation Commission, was therefore appointed, composed of Senate and House members and gubernatorial appointees, as follows: (Laws 1927, Chap. 244)

W. I. Nolan, Lieutenant Governor, Chairman
John A. Johnson, Speaker of the House, Vice Chairman

Senators: Fred W. Besette
Fred D. Long
Louis P. Johnson
Adolph S. Larson
George Nordin

Representatives: Rollin G. Johnson
W. I. Norton
Louis Enstrom
John O. Haugland
John Nordine

W. B. Douglas

The interim commission conducted studies and hearings and made its report to the 1929 Legislature (Minn. Reforestation Com. Report to House and Senate, Nov. 1928). After holding hearings in various sections of the State, as well as in Canada and several of the Eastern states, the commission in its report made recommendations regarding fire protection, state forests, auxiliary forests, protection against forest insects and disease, reforestation, tax-delinquency and allied subjects.

It proposed to make the necessary legislative changes on a long-range basis. It recommended that state forests should be managed on scientific principles of forestry, with expenses to be paid out of income derived from the state forests. It also recommended that state certificates of indebtedness be issued for the purchase of ditch bonds to save certain northern Minnesota counties from bankruptcy. A land economic survey was suggested. Subsequent legislation reflected the recommendations for improvement in administration in the state's forest resources.

State Land in Minnesota National Forest Withdrawn from Sale

Another important law enacted during 1927 with regard to forest lands was the act which withdrew from sale all state lands within the boundaries of the Minnesota National Forest and establishing them as state forests to be managed as other state forests were managed. (Laws 1927, Chap. 246)

Auxiliary Forest Law Enacted

As a result of an amendment to the State Constitution in 1926, the first auxiliary forest law was enacted in 1927. (Laws 1927, Chap. 247) It provided for a limited and special taxation of forest lands under certain conditions. The act was intended to encourage and promote forestation and reforestation of private lands by fixing in advance a definite and limited annual tax on forest lands for a definite term of years, and an agreed tax at or after the end of such term upon such timber and other forest products so grown. The rate of taxation was still too high, however, and not many applications were made and none at all were approved by the county boards. Private forestry consequently received no encouragement until some years later.

State Land Classification Authorized

The 1927 Legislature authorized and directed the Conservation Commission, through the Commissioner of Forestry and Fire Prevention, to examine, classify and make a list of all state-owned lands suitable for afforestation and reforestation and to make a report thereof in detail to the next legislature. The Legislature appropriated \$35,000 for the use of the commissioner in carrying out the act. (Laws 1927, Chap. 248)

The resulting report was published and submitted to the Legislature of 1929. ("State Lands, Their Agricultural and Forest Possibilities," Sept. 1928) Of the 1,943,235 acres of state land, the land classification covered 311,408 acres which represented 16 percent of the state's public domain.

White Pine Blister Rust Control Authorized

White pine blister rust, a European disease which destroyed white pine, was reported and recognized as a menace and the Commissioner of Forestry and Fire Prevention was authorized to promulgate control of the disease in the State. (Laws 1929, Chap. 218) Because of the lack of a sufficient appropriation of funds, not much was accomplished by the State in the early years.

Land Economic Survey Authorized

The Department of Conservation in 1929 was authorized and directed to make a land economic survey in the forest area of the northern part of the State in cooperation with the University of Minnesota Department of Agriculture. (Laws 1929, Chap. 247) Funds were made available to complete but one county. The county selected was Hubbard County, located in the north-central part of the forest area. A comprehensive report and maps were published. Although only one county was covered by the survey, the information obtained supplied a realistic approach to the land use problem, as well as a guide to planned development and a means for defining the pattern of land use.

Land Exchange Amendment

The checkerboard pattern of federal, state and private land ownership had become apparent and an amendment to the State Constitution was proposed in 1929 to authorize the exchange of public lands of the State for lands of the United States. (Laws

1929, Chap. 245) The amendment failed to pass, however, at the next general election. After further failures, it was finally passed in 1938, following a strenuous educational campaign on the part of its proponents.

Additional State Forests Established

The Legislature set up a large acreage as state forests by withdrawing from sale certain state school and other public lands and establishing them as state forests. (Laws 1931, Chap. 124) The land was widely scattered and difficult to administer. Although they were not named in the legislative act, they became the Pine Island, Koochiching, Kabetogama, Cloquet Valley, Fond du Lac, St. Croix, Savanna, Sturgeon River, George Washington, Badoura, Pillsbury, White Earth, Foot Hills, and Beltrami Island state forests, in whole or in part.

New Department of Conservation

One of the noteworthy acts of the Legislature of 1931 was the creation of a genuine Department of Conservation. (Laws 1931, Chap. 186) The three-man Conservation Commission was abolished. A new Department of Conservation was created under the supervision and control of a Conservation Commission composed of five non-salaried members appointed by the Governor, with the advice and consent of the Senate. The Commission was empowered to employ a commissioner for a term of six years.

The Commissioner of Conservation was given all the powers and duties vested by law in the Commissioner of Forestry and Fire Prevention, the Commissioner of Game and Fish, the Commissioner of Drainage and Waters, the Department of Drainage and Waters, and the Department of Conservation. At the same time, these offices were abolished.

The Commissioner of Conservation was also given the powers and duties vested in or imposed upon the State Auditor, as the Commissioner of Lands, with respect to the public lands, timber, waters, and minerals of the State. The Department of Conservation was organized with four divisions; namely, Forestry, Game and Fish, Drainage and Waters, and Lands and Minerals. Each division was in the charge of a director, subject to the general supervision and control of the commissioner. Thus the Commissioner of Forestry and Fire Prevention became the Director of the Division of Forestry, Department of Conservation.

Timber Placed Under Control of Forestry Division

Under this act the administration of all state forests and other land acquired or set apart for forestry purposes, and the sale of all state timber whether upon state forests or other state lands, formerly vested in the State Auditor as Land Commissioner, were put under the control of the Division of Forestry. (Laws 1931, Chap. 186, S.4(b))

The Director of Forestry was authorized to sell dead, down, dying and insect infested or diseased timber on state forests without bids in amounts not to exceed \$100 in appraised value on any 40-acre tract to any one person in any one calendar year. Such sales helped the small operator and simplified

for the state the process of disposing of small amounts of timber for salvage purposes. (Laws 1931, Chap. 263, S.4)

State Parks Under the Jurisdiction of the Forestry Division

The act which created the Department of Conservation provided that the Director of Forestry shall have charge of all state parks. (Laws 1931, Chap. 186, S.4(b)) The state parks in existence at that time were as follows:

1. Itasca State Park
2. Horace Austin State Park
3. Minneopa State Park
4. Jay Cooke State Park
5. Sleepy Eye State Park
6. Ford Ridgeley State Park
7. Inter-State Park
8. Charles A. Lindbergh State Park
9. Scenic State Park
10. Whitewater State Park
11. Traverse de Sioux State Park
12. Camp Release State Park
13. Toqua Lakes State Park
14. Alexander Ramsey State Park
15. Lake Shetek Monument
16. Sibley State Park
17. John Latsch State Park

Conservation Commission Members Appointed

The first members of the Conservation Commission were as follows:

William E. McFwen, Chairman
James T. Williams, Vice Chairman
John R. Foley, Secretary
Richard R. Bailey
Ernest R. Reiff

Wm. T. Cox Appointed Commissioner of Conservation

Wm. T. Cox, who had been dismissed as State Forester in 1924 by the State Forestry Board, was now appointed Commissioner of Conservation by the Conservation Commission. Grover M. Conzet became Director of the Division of Forestry.

A Forest Policy and Program Published

Early in 1931 a Forest Policy and Program for Minnesota, prepared by Mr. Conzet and his staff, was published. Although policies and programs had been in effect prior to its publication, it was the first time that they had been put out in printed form. This comprehensive outline was based on the economic principle that all lands should be put to their highest and most productive, long-time use for the permanent good of the greatest number of people.

Badoura Nursery Established

Not until 1931 was the State authorized by legislation to produce tree planting stock, and then it was limited to native coniferous trees to be planted only on state-owned lands. (Laws 1931, Chap. 281) A strong nurserymen's organization had succeeded in keeping such a law off the statute books. The Forest Service had been denied one of its most important tools.

The nursery had actually made a beginning several years before a legislative appropriation was forthcoming, and seedlings were soon available for planting. The nursery was established at Akeley in Hubbard County on sandy cut-over lands. Foresight in the establishment of this nursery helped the division to gain momentum rapidly during the CCC and WPA days, when unlimited man-power became available practically overnight.



Minnesota's First Tree Planting Stock was Raised at Badoura Nursery.

Conservation Areas Established

Conservation Areas were established in Aitkin, Mahnomen and Roseau counties by the Legislature of 1931. (Laws 1931, Chap. 407) Besides being an effort to initiate a land classification program, it also enabled the State to assist these counties with their ditch bond indebtedness. The next session of the Legislature set up the Marshall County Conservation Area. Actually, the establishment of these conservation areas was but an aftermath of

the creation of the big Red Lake Game Preserve of 1929. (Laws 1929, Chap. 258)

The Red Lake Fire of 1931

Fires burned over 993,000 acres of land during 1931. One of the worst fires burned from Red Lake to the Canadian border and caused the loss of four human lives and took an unknown toll of wildlife. It occurred in September, and became known as the Red Lake Fire. Countless settlers in the area lost their homes and cattle and all their possessions.



Fires burned nearly one million acres in 1931. Deadliest of them all was the Red Lake fire which destroyed thousands of acres of valuable timber (above left), damaged farmlands (above right), and took an unknown toll of wildlife (below). Four persons died.



First Land Zoning Act

A law was enacted in 1933 to permit the county board of any county, with the approval of the Conservation Commission, to establish conservation and agricultural zones. (Laws 1933, Chap. 418) The law also provided for the exchange of acquired lands or tax-forfeited lands within the agricultural zones for private lands within the conservation zones in the same county. Fifty percent of the gross proceeds from all lands acquired in the conservation zones were to be paid to the county. All lands acquired by the State under this act became a part of the state forests. Although this law is notable as the first zoning act, it accomplished very little.

Land Utilization Committee Appointed

A committee of citizens, including the president of the University, the Director of the Lake States Forest Experiment Station, and prominent conservationists and legislators were appointed by the Governor in 1932 to make a study of land utilization in Minnesota and to develop a state program for the vast area of cut-over lands.

This committee attempted a rough classification of land in the northern counties and a subdivision of the region according to predominant use of the land or its general suitability for such use. An extensive report was prepared in which were presented a series of constructive recommendations. In broad terms, it described what should be done and what should not be done in the days ahead. ("Land Utilization in Minnesota," U of M Press, 1934)

Wm. T. Cox Dismissed

Mr. Cox, not seeing eye to eye with certain policies of the Conservation Commission, was dis-

missed in 1933, after having served since 1931 as Commissioner of Conservation. Appointed in Mr. Cox's place was E. V. Willard, then Director of the Division of Drainage and Waters.

Mr. Cox continued his activities in forestry and wildlife conservation in this country and in Canada, and served for some years as director of the U. S. Fish and Wildlife Service of the Upper Mississippi. In 1935 he became Regional Biologist for the federal Resettlement Administration in Minnesota.

At one time, through an arrangement with the federal government, he was in charge of establishing a forest service in Brazil. Another honor came to him when in September of 1952, Mr. Cox was chosen as the recipient of the annual award of the National Association of Conservation Education and Publicity at its convention in Galveston, Texas, for meritorious service to state, national and international progress. Presentation of the award was made to Mr. Cox by Governor Anderson of Minnesota on behalf of the association. On January 25, 1961, his 83rd birthday, Mr. Cox died.

Forest Income Credited to Counties

In 1933 the law was passed which provided that all income which may be received from lands acquired by the State within areas which had been designated as state forests was to be credited to the general revenue fund of the State, and that 50 percent of the gross receipts from such lands were to be paid to the counties in which the lands were situated. (Laws 1933, Chap. 313) This specifically applied only to acquired lands and not to the state trust fund lands. For quite a number of years, the income from such lands was negligible, but it continued to increase and is now quite substantial.

THE WORK OF THE CIVILIAN CONSERVATION CORPS (CCC)

Emergency Conservation Work Authorized

Emergency Conservation Work (ECW) was authorized by an Act of Congress, approved March 31, 1933, and extended by the emergency relief appropriation act of 1935. (Public No. 5, 73rd Congress, S.598) This is the organization which directed the Civilian Conservation Corps (CCC) forest camp program. It meant that practically overnight thousands of young men were available for work in fire protection, fire fighting, forest management, disease control, nursery work, and all allied forest and conservation projects.

Work plans were rushed to completion in order to provide the camps with projects on which to use the available manpower. In Minnesota during the eight years in which the CCC camps were in operation, the enrollees put in approximately 3.5 million mandays of work.

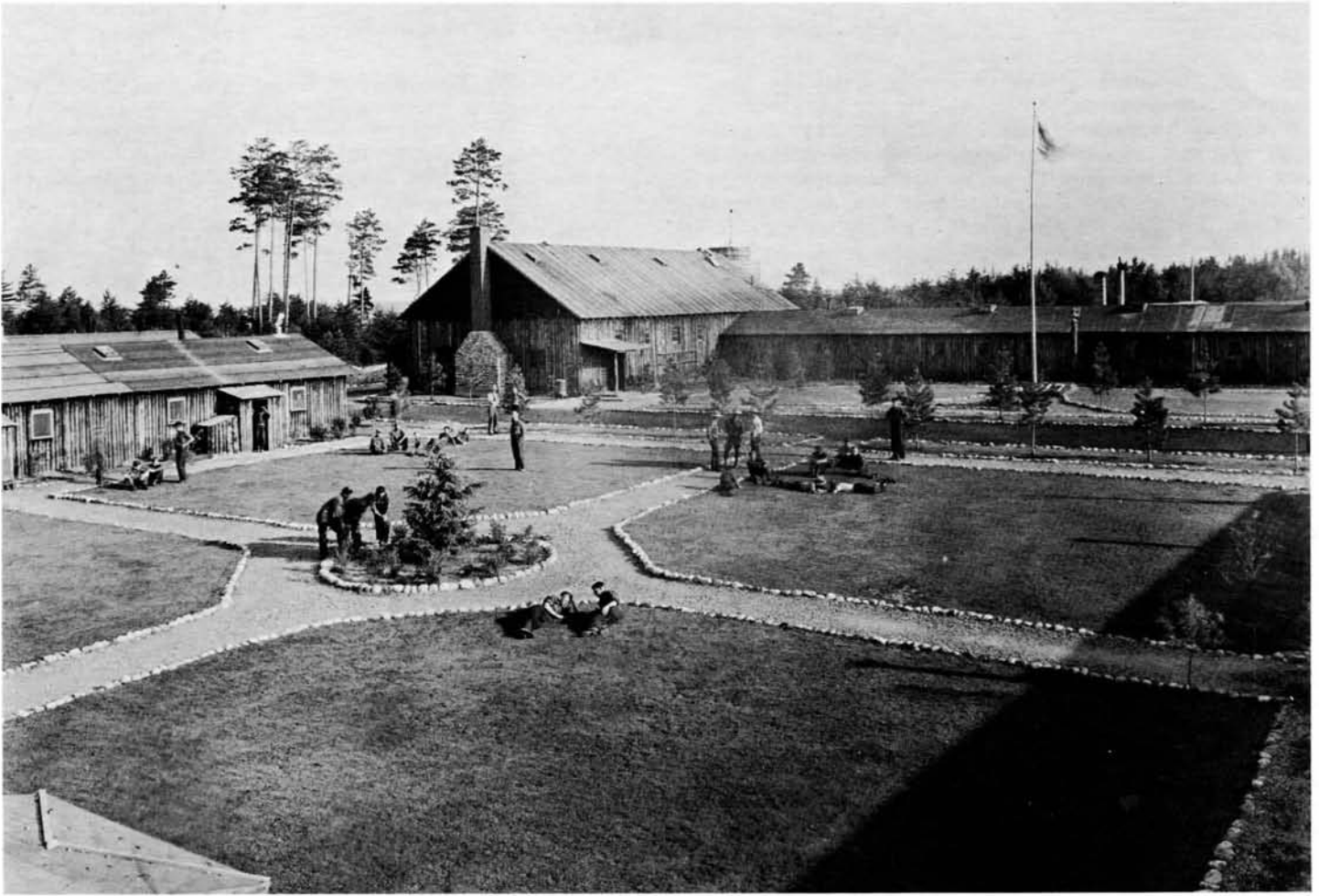
The CCC's spent 123,400 mandays fighting for-

est fires, 11,800 mandays manning lookout towers, 6,400 mandays in pre-suppression work, built 330 miles of firebreaks, 1,635 miles of telephone lines, and 1,380 miles of truck trails. They accomplished 3,900 miles of roadside hazard reduction and 24,600 acres of interior hazard reduction. Reconnaissance work was done on 3,739,500 acres of forest land.

The available labor enabled expansion of the Badoura Nursery and the establishment of another. Altogether, 25 million trees were planted by the CCC's, and 50,800 mandays of nursery work was done. Over 9,000 bushels of cones were collected. The total number of trees planted by the CCC, WPA, TPA, etc., from 1933 to 1942 was 43,736,547 trees, principally on state lands and entirely on public owned lands.

Additional State Forests Established

Various laws were enacted in 1933 to acquire certain lands to expedite the work of the CCC, and



Workers Relax at the Side Lake CCC Camp in 1936.

enabling acts were passed to permit certain work projects to be carried on. Thirteen new state forests were established upon which CCC work could be carried on. (Laws 1933, Chap. 419) These forests were listed in the law and their boundaries were definitely defined. Provision was made for the management and control of these forests and for the acquisition of lands within such areas by the State, by condemnation, purchase, or gift. The 13 state forests were the following: Beltrami Island, Cloquet Valley, Finland, Fond du Lac, Foot Hills, Grand Portage, Kabetogama, Land O'Lakes, Pine Island, Savanna, Third River, White Earth, and lands in Becker and Mahnomen counties. All income, except from trust fund or rural credit lands was credited to the state forest fund. Income was very small because most of the lands within the boundaries of these forests were trust fund lands and dedicated for certain purposes.

State Shipstead-Nolan Law Enacted

In order to preserve shorelines, rapids, waterfalls, beaches and other natural features in an unmodified state of nature, a law was enacted in 1933 regulating water fluctuations and providing that no dams were to be constructed in any body of water within or bordering Cook, Lake, and St. Louis counties, the same area designated in the Act of Congress of July 10, 1930, known as the Shipstead-Nolan Act. (Laws 1933, Chap. 412)

Land Use Committee Created

A Land Use Committee was created by the Legislature of 1933. It was composed of the Governor, the chairman of the Conservation Commission, the Commissioner of Conservation, the Commissioner of Agriculture, the Commissioner of Education, the Commissioner of Highways, and the chairman of the Tax Commission. This committee worked with a similar committee set up in each county which had 25 percent or more of its land area delinquent for non-payment of taxes, or where 25 percent or more of its land was opened by the State or the Federal Government. Such county committees were composed of the county auditor, the chairman of the board of county commissioners, the county treasurer, surveyor, and superintendent of schools. The purpose of the committee was to classify all lands, public and private, as to its adaptability for agriculture or forestry. No lands classified as forestry land were to be sold or leased for agricultural purposes. (Laws 1933, Chap. 436)

This law was the first concrete action along the lines of land use planning and land zoning, following the zoning law passed by the previous legislature.

Christmas Tree Tagging Law Enacted

The 1927 Christmas tree cutting regulation law

was strengthened by the 1935 Legislature. (Laws 1935, Chap. 331) The new law provided that all trees cut and offered for sale as Christmas trees or for other decorative purposes must have an official tag issued by the Director of the Division of Forestry attached to them.

State Parks Placed in Separate Division

The Division of State Parks was created in 1935. (Laws 1935, Chap. 340) All the powers and duties relating to state parks heretofore vested in the Director of the Division of Forestry were transferred to the Director of the Division of State Parks, except that the Director of Forestry still had jurisdiction over the timber in Itasca State Park, which was also a forest reserve.

Willful Burning, Third Degree Arson

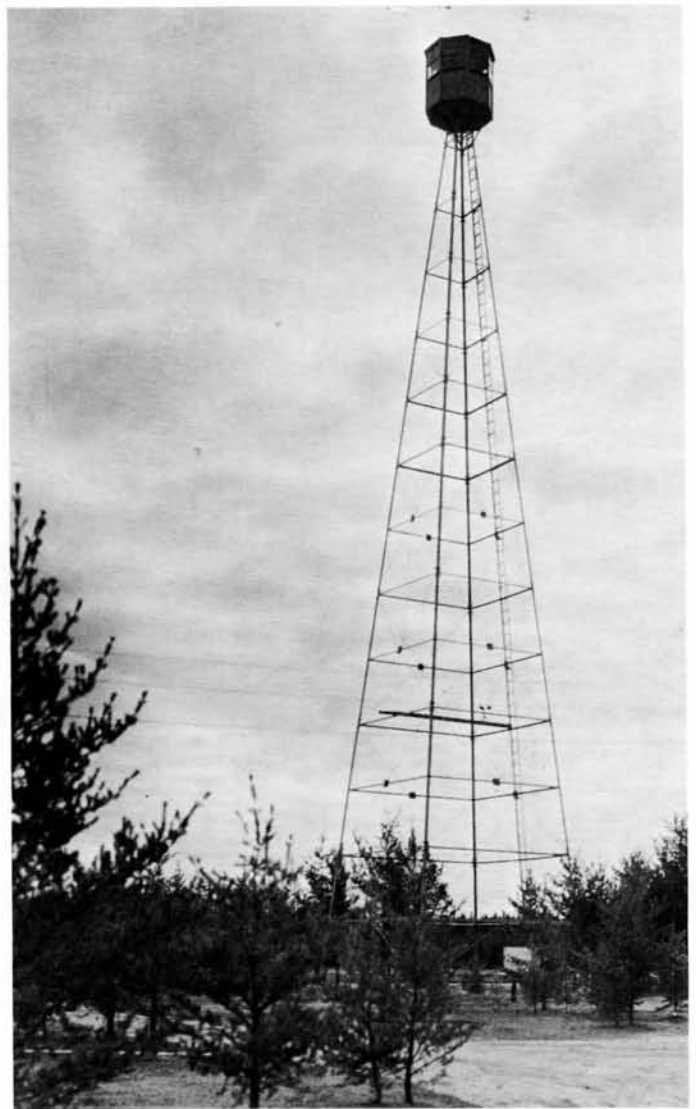
Other laws were enacted at this session of the legislature which were of benefit to forestry. The penalty for willfully burning or setting fire to any standing timber was changed from a misdemeanor to third degree arson. (Laws 1935, Chap. 144)

Municipal Forests, Cities

Cities of the first class were authorized to obtain lands by purchase or condemnation on lake-shores for municipal forests, the selection of such lands, and the management plans therefor to have the approval of the Director of Forestry. (Laws 1935, Chap. 203)

Peat Lands Withdrawn from Sale

All state-owned lands chiefly valuable for deposits of peat in commercial quantities were withdrawn from sale by act of the 1935 Legislature. (Laws 1935, Chap. 322) Whereas it had once been the thought that peat had to be burned off the land to make it available for agriculture, now peat in itself was beginning to be deemed of value.



Old Ladder-Type Lookout Tower.



A 1934 Fire Truck.



Typhoon Pumping Unit Used to Fight Fire at Carlos Avery Game Refuge.

Additional State Forests Established

Thirteen additional state forests were established by the 1935 Legislature, and some additions made to existing state forests. (Laws 1935, Chap. 372) It should be noted that up to and including the 1931 act, only the state land within designated boundaries was made state forests. The 1933 and 1935 laws provided that land acquired within these areas also became state forests. The 13 state for-

ests set up by the 1935 act were as follows: Bay Lake, Buena Vista, Crow Wing, Mille Lacs, Mississippi Headwaters, Nemadji, Northwest Angle, Paul Bunyan, Pillsbury, Rum River, Smoky Hills, Waskish, Blackduck, and additions to the Foot Hills, Land O'Lakes, and White Earth state forests.

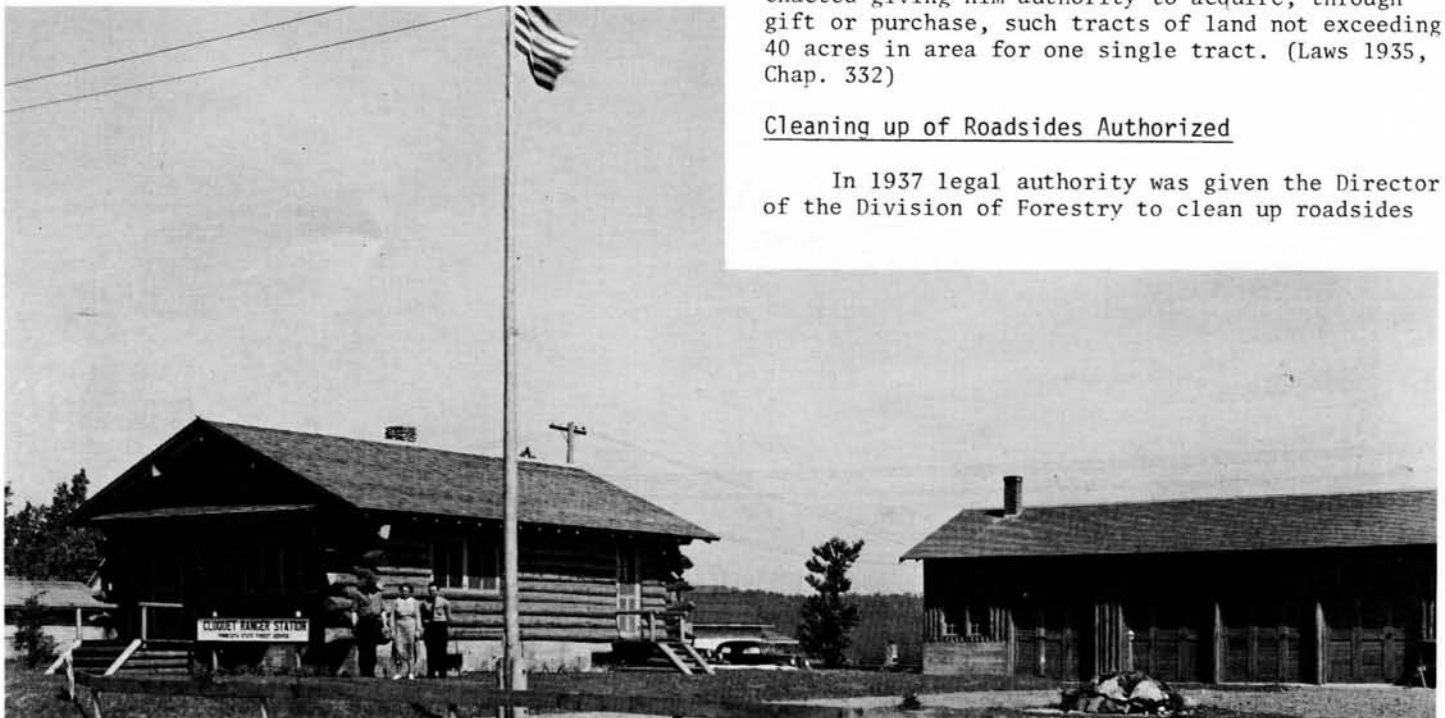
Director Authorized to Acquire Tracts of Land

To enable the Director of Forestry to acquire small tracts of land to be used for administrative purposes, tower sites, fire prevention, and for any other uses in connection with his duties, a law was enacted giving him authority to acquire, through gift or purchase, such tracts of land not exceeding 40 acres in area for one single tract. (Laws 1935, Chap. 332)

Cleaning up of Roadsides Authorized

In 1937 legal authority was given the Director of the Division of Forestry to clean up roadsides

Cloquet Ranger Station--1934.



for the removal of fire hazards on state-owned land in any state forest, and also to cut and remove green standing timber where such removal was in the interest of forest management. (Laws 1937, Chap.113)

Authority to Close Roads and Trails

The Director was empowered to close roads and trails traversing state-owned or state-controlled lands through the forest area if fire conditions warranted such action being taken. (Laws 1937, Chap. 114)

CONSERVATION DEPARTMENT REORGANIZED

The Conservation Department was again reorganized in 1937. (Laws 1937, Chap. 310) The Conservation Commission was abolished and replaced by a Commissioner of Conservation to be appointed by the Governor with the advice and consent of the Senate. E. V. Willard was commissioner at the time. The following year he was dismissed, as was Grover M. Conzet, Director of the Division of Forestry, with the change of administration.

Herman C. Wenzel replaced E. V. Willard as Commissioner of Conservation, and Ellery Foster replaced Grover M. Conzet as Director of Forestry. Mr. Wenzel then appointed Mr. Willard Chief Engineer of the Department of Conservation. In 1939 Mr. Wenzel was dismissed and replaced by Lew Merrill as Acting Commissioner. Several other acting commissioners were appointed from time to time until Dr. W. L. Strunk was appointed commissioner in 1940.

Henry G. Weber Appointed Director of Forestry

In 1939 Ellery Foster resigned as Director of the Division of Forestry. In his place, Henry G. Weber, Deputy Director of the Division, was appointed

ed Acting Director. He was made Director the following year. *Heinie*, as he was known to great and small, was born in Minneapolis in 1886. From 1906 to 1908 he was associated with the U. S. Indian Service at Havasupai, Arizona, in educational work among the Indians. Then he returned to attend the University of Minnesota, and graduated from the School of Forestry with a B.S. degree. After working for the U. S. Forest Service in New Mexico as timber cruiser during summer vacations, he joined the newly organized Minnesota Forest Service in 1913 as a Forest Patrolman.

From 1921 to 1923 he was Surveyor General of Logs and Lumber for the Duluth district. Then he was associated with the W. T. Bailey Lumber Company at Virginia. In 1931 he came back to the Division of Forestry as technical assistant in charge of state timber. From 1934 to 1937 he supervised all land acquisition for the Department of Conservation. He was Director at the time of his death on October 1, 1948.

During his 35 years in forestry work he saw the infant State Forest Service develop from a small organization composed of a handful of forest rangers headed by a state forester, with a yearly appropriation of \$75,000, to a well-knit organization of several hundred trained men, supported by an annual appropriation, state and federal, of upwards of a million dollars.

He lived through the time when the use of fire was a popular and cheap land clearing tool but which created a terrific forest fire problem. He witnessed the devastation wrought to life and property by uncontrolled forest fires, and saw the need for a relentless crusade to arouse public opinion to the certainty of the ultimate destruction of our

Rangers at Grand Rapids-1934. Top row, l-r: R. Balsiger, M. Rhodes, A. Erickson, F. Pugh. Center: D. Wilson, A. Anderson, M. Gilpin, V. Lofgren, D. Willems, J. Fritzen, C. Carlton. Bottom: A. Stone, P. Swedberg, J. Nelson, M. Guthrie, P. Bayle, L. Beatty, E. Rhodes.



forest resources unless heroic protective measures were adopted. He was rewarded by the satisfaction of seeing notable advances in fire protection that had been made possible because of an aroused and educated public opinion.

Shortly before his association with the forest service the forest lands of Minnesota held second place among the states as a timber producer. He saw logging and fires denude the state's forests until the State had to depend on importation of lumber for its needs. But he saw, too, how these same lands were being brought back to produce raw materials to again support wood using industries which employ more people and support community life on a larger scale than when lumbering, as such, was at its height. There was optimism over the future of the state's timber as a stable and dependable source of prosperity, if properly managed.

Following the passage of the state tree planting act in 1947, he initiated plans for a great expansion of state nursery production and distribution of seedling trees of all species for planting on private, as well as public, lands throughout the State. The progress of this program will be a living and growing memorial to *Heinie* Weber's untiring service.

Through the years the public had learned to know the recreational value of forests and this added use of state forests and lakes and streams within state forests received a marked stimulus during this period. The constant aim was to develop an all-around program for the management of the forest resources of the State which would insure maximum sustained yield of timber products and secure the greatest possible public benefits from these resources.

Like his predecessors, Mr. Weber strove for better pay and working conditions for employees in his Division. He wisely delegated responsibility and authority to his subordinates, and gave them sound guidance and good leadership, and backed them up in the performance of their duties without fear or favor.

Civil Service Law Enacted

In 1939 a Civil Service Department was created by the Legislature. (Laws 1939, Chap. 441) All state employees with a five-year service record were automatically blanketed in, and others were required to take a qualifying examination. Subsequently no new employees could be hired unless they had passed an examination for their particular job. Prior to the enactment of the state civil service law, the Department of Conservation in 1938 had already set up a system of examinations for its employees along the same lines.

Land Exchange Amendment Passed

After having been submitted to the electorate at every election since 1930, an amendment to the State Constitution authorizing the exchange of land owned by the State for land of the United States and privately-owned land, was finally passed at the general election in 1938.

As a result of this amendment, the Legislature

of 1939 authorized the exchange of state-owned land but no exchanges were made during the year because of defects in the enabling act. (Laws 1939, Chap. 382) The law has since become workable and many exchanges have been consummated under its provisions, resulting in the consolidation of ownerships.

Tax-Forfeited Land Classified

A forward step in the administration of tax-forfeited lands and the timber thereon was taken with the passage of a law in 1939 which provided that all lands forfeited to the State for the non-payment of taxes were to be classified by the county board as agricultural or non-agricultural (conservation) lands, and the classification approved by the Commissioner of Conservation before any land was offered for sale. (Laws 1939, Chap. 328) Provisions were further made that any merchantable timber on the land was to be appraised and the appraisal approved by the Commissioner of Conservation and paid for before the land could be sold.

County Land Zoning

Under authority of a legislative act of 1939, a program was introduced to establish definite boundaries between forest land and land suitable for agriculture. (Laws 1939, Chap. 340) Within the next few years seven counties zoned their lands, demarking areas in which settlement was considered desirable, separate from conservation lands on which no further settlement, except possibly summer residence, was to be permitted. (Laws 1939, Chap. 340) (Aitkin, Beltrami, Carlton, Itasca, Koochiching, Lake of the Woods, and St. Louis counties)

\$250 Timber Sales Without Bids Authorized

So that small amounts of green standing timber could be sold without the formality of obtaining bids, the 1939 Legislature amended a previous law, thereby permitting the Director of Forestry to sell such timber, as well as dead, down, and diseased timber, not exceeding \$250 in value (instead of \$100) to any one person in any one year. (Laws 1939, Chap. 352)

Additional Lands Added to State Forests

Through the passage of an enabling act by the 1939 Legislature, which authorized the Commissioner of Conservation to make a settlement of claims for damages to state lands resulting from the maintenance of dams on the international boundary waters at International Falls and Kettle Falls, the State acquired some 12,000 acres of land in Lake, St. Louis, and Koochiching counties. (Laws 1939, Chap. 343)

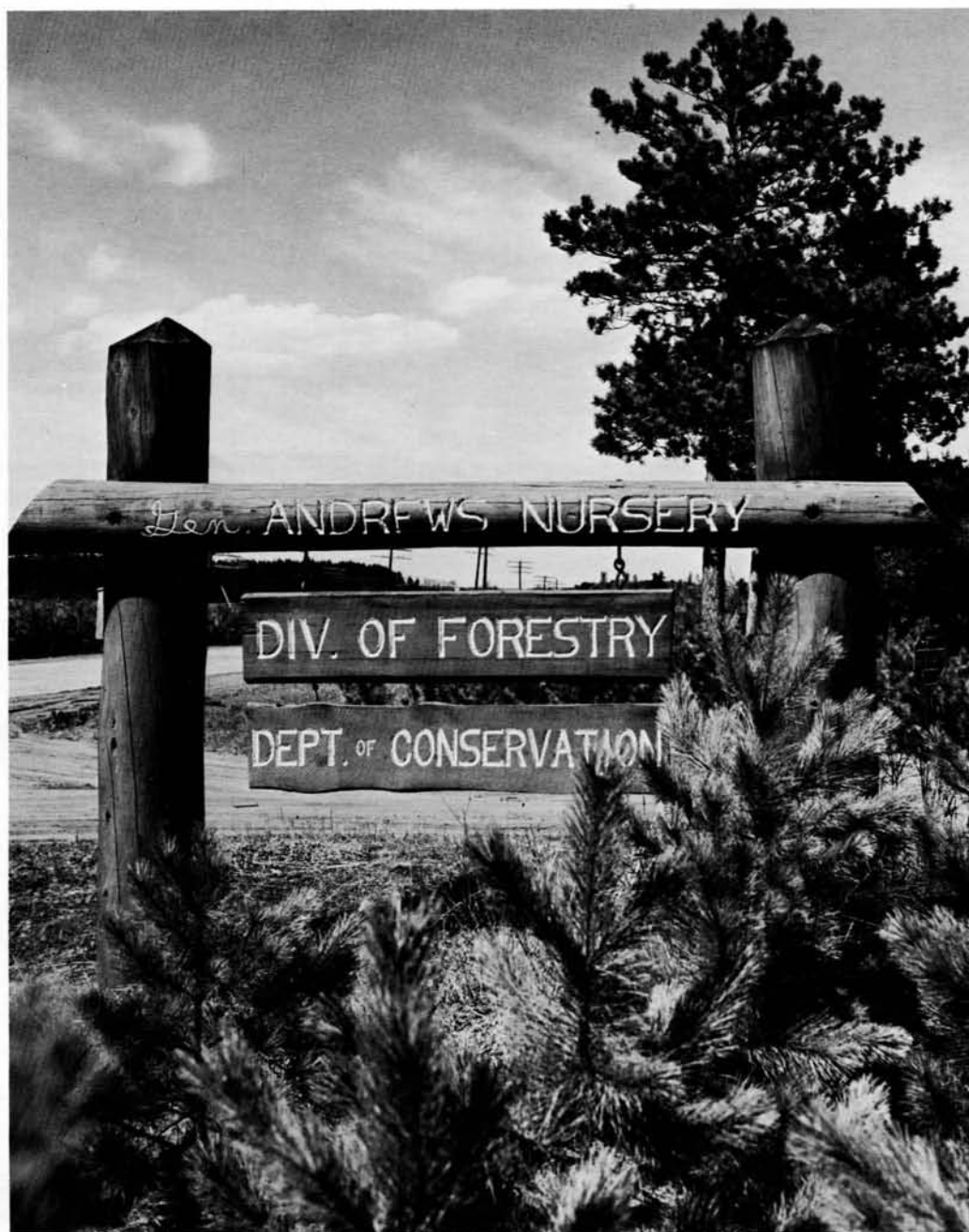
The law provided that all such lands conveyed to the State in settlement of the claim shall be state forest lands, to be operated and managed the same as other state forests. The Commissioner was empowered to attach the lands to any existing state forests or operate them as separate forests, as he deemed expedient. The law also provided that the lands could be exchanged for other lands except that the lands bordering on the international boundary waters or other lakes or streams could not be exchanged unless expressly authorized by law.

General C. C. Andrews Nursery Established

A second forest tree nursery was started near Willow River in Pine County in 1939, under the direction and supervision of Ray Clement, forester in charge of nurseries and planting for the Division of Forestry - the driving force behind the expanding nursery program. It was named in honor of General C. C. Andrews, Minnesota's first Chief Fire Warden and strong forest advocate.

The nursery was developed largely with WPA labor. Even the cement blocks and the doors for the

400 foot long U-shaped building at the nursery were made on the site. WPA ended in 1941 before the nursery was entirely completed. With the loss of WPA, CCC, TRA, and the other work relief agencies, the Division turned to the tree planting machines to take the place of hand labor. Mr. Clement designed and perfected the first tree planting machine. It has been improved with each succeeding model and is now considered entirely satisfactory. The Division has a large number of planting machines. Many were purchased by the State Bankers Association and other cooperators for use by the Division as well as private land owners.



Minnesota's Second Forest Tree Nursery, Named after General C. C. Andrews, was Established in 1939.

Nursery Law Amended

The state nursery law was amended in 1941, permitting the supplying of forest planting stock to any political subdivision of the State for use on lands dedicated for forestry and conservation purposes. (Laws 1941, Chap. 84) It was still illegal, however, for the Division of Forestry to furnish planting stock for reforesting privately-owned land.

Tax-Forfeited Lands Devoted to Conservation Uses

County boards were empowered to resolve that certain tax-forfeited lands were to be devoted to conservation uses and certified to the State. (Laws 1943, Chap. 511) The lands when accepted were to be held by the State free from any trust in favor of the taxing districts, and devoted to forestry and other conservation purposes under the jurisdiction of the Commissioner of Conservation and the divisions of the Department of Conservation. Considerable land was turned over to the Division of Forestry for conservation purposes as a result of this law.

State Forest Laws Codified

All laws relating to the establishment of state forests were recodified in 1943 and put into one act. (Laws 1943, Chap. 171) The Legislature thus reestablished a total of 29 state forests and

withdrew from sale all lands within these state forests, as well as any lands which the State might acquire within their boundaries. (Laws 1943, Chap. 171, S.1) The purpose of this was to put as many as possible of the state forests under one law, thus assuring uniform authority and administration. The same act repealed most of the old laws pertaining to state forests.

The following state forests were included in this act: Beltrami Island, Buena Vista, Cloquet Valley, Crow Wing, D.A.R. Memorial, Finland, Fond du Lac, Foot Hills, General C. C. Andrews, George Washington, Grand Portage, Kabetogama, Koochiching, Land O'Lakes, Mille Lacs, Mississippi Headwaters, Nemadji, Northwest Angle, Paul Bunyan, Pillsbury, Pine Island, Rum River, Sand Dunes, Savanna, Smoky Hills, St. Croix, Third River, White Earth, and Blackduck.

Three of the original forests were not included in the new law; namely, the Burntside, Bowstring and Minnesota state forests.

The law also provided that all income from acquired lands within the state forests would be credited to a state forest fund, and that the counties in which these forests are located would receive 50 percent of such income. (Laws 1943, Chap. 171, S.7) Over the years, this amounted to a considerable sum.



Wooden Frog Campsite at Kabetogama Lake.

Minimum Timber Cutting Regulations

Minnesota's first cutting practices law was enacted in 1943. (Laws 1943, Chap. 290) It regulated the size of trees which may be cut and provided that a certain number of seed trees be left per acre. The law applied to all timber cutting in the State, regardless of ownership. Violations were vigorously prosecuted, but the courts did not always uphold the law.

Legislative Interim Forestry Committees Appointed

In 1937, 1939, and again in 1943 legislative interim committees were appointed by the legislature to make a study and investigation of forest problems. (I. 1937, Chap. 391; 1939, Chap. 418; 1943, Chap. 578) Each committee produced a report of its findings and recommendations and accomplished a great deal in promoting needed legislation.

Chester S. Wilson Appointed Commissioner of Conservation

In 1943 Chester S. Wilson, then Deputy Attorney General of the State of Minnesota, replaced Dr. W. L. Strunk as Commissioner of Conservation. As Deputy Attorney General, Mr. Wilson had drawn up the laws under which the Department of Conservation was functioning, and consequently he knew precisely what its duties and responsibilities were. His appointment met with instant approval from all parts of the State and from all types of organizations. Mr. Wilson appointed E. V. Willard, then Chief Engineer for the Department, as Deputy Commissioner of Conservation, which position he held until his retirement in 1953.

Keep Minnesota Green Committee Organized

In 1944 Minnesota became the third state in the nation to inaugurate a *Keep Green* movement, being preceded only by the states of Washington and Oregon. The program eventually became nationwide in its influence and interest. It was started in Minnesota by a group of interested citizens who gave of their time and money to do so. The program has grown until it has spread to all parts of the State and there are many county KMG committees. Very definitely it has become an important factor in the forest fire prevention program in Minnesota.

The Keep Minnesota Green committee's work with the youth organizations of the State has helped to impress upon the people the need for care with fire in the woods. Its work with newspapers, radio, and television stations has carried to all parts of the State the message of the value of our forests.

Tree Farm System Organized

The Tree Farm program in Minnesota was inaugurated at a meeting held in St. Paul on August 13, 1943. The meeting was called by L. A. Furlong, Chairman of the Forest Industries Information Committee, and was held at the Minnesota Club in St. Paul. The meeting was attended by a large number of people interested in the continuous production of commercial forest crops on private forest lands. Its purpose was to inform the public of the accomplishments of private forest land owners in other states in keeping their lands in continuous forest

production and under adequate forest fire control.

The program is sponsored by the Keep Minnesota Green Committee. Agreements have been worked out with private and public agencies whereby they have made foresters available to examine the lands proposed for tree farms within the sphere of their working circle. The tree farm movement has struck a responsive chord among the farming element, and the larger industrial land holders have been quick to realize the benefits to the forestry program as a whole.

After a slow start, the movement gained momentum and 282 tree farms were established by 1953, containing 281,645 acres of land. During 1958, Minnesota's centennial year, a goal of 1,000 tree farms was set and attained.

Memorial Forests Authorized

The establishment, by counties, of memorial forests was authorized by the Legislature of 1945. (Laws 1945, Chap. 347) The law provided that any county may by resolution set aside tax-forfeited land which is more suitable for forestry purposes than for any other purpose and dedicate the lands as a memorial forest. Subsequently memorial forests were established in nine counties and the acreage exceeded 900,000 acres.

Tree Planting Stock from Commercial Nurseries

The Commissioner of Conservation was authorized in 1945 to make contracts with commercial nurserymen for the procurement of tree planting stock to be sold by the State for planting in any auxiliary forest, woodlot, or shelterbelt, for erosion control, soil conservation, water conservation, food and cover for wildlife, and afforestation or reforestation on public or private lands. (Laws 1945, Chap. 535) The pressure for planting stock for privately-owned lands was becoming greater, and this law was a concession, although it proved unsatisfactory because commercial nurseries were unable to produce sufficient planting stock at a low enough cost.

Auxiliary Forest Law Amended

The auxiliary forest law was amended in 1947 with reference to the method of taxation. (Laws 1947, Chap. 467) Timber which was estimated to be merchantable at the time of filing the auxiliary forest contract was to be taxed in the following manner when cut: In the event the timber was cut within one year after June 30 following the date of filing of the contract, the owner was to pay a yield tax of 40 percent of the value of the merchantable timber on the stump at the time of cutting, and this tax was to be reduced by 2 percent on each June 30 following, until it had become 10 percent, after which it would remain constant. A law was also enacted which authorized the sale of tax-forfeited lands for auxiliary forest purposes. (Laws 1947, Chap. 496) A good many thousands of acres of such lands were purchased and placed under the auxiliary forest contracts.

Nursery Law Amended to Permit Planting on Private Lands

At long last, in 1947, the State was author-

ized by the Legislature to produce planting stock for use on privately-owned lands, and no longer was the State restricted to native coniferous trees. The state nursery law was amended, authorizing the Division of Forestry to produce any kind of tree or woody perennial shrubs except such cultivated varieties as are capable of producing fruit for human consumption. (Laws 1947, Chap. 94) Such planting stock was to be furnished for planting on privately-owned lands for conservation purposes at a cost determined by the Commissioner of Conservation. Production of nursery planting stock was immediately accelerated.

Private Forest Management Service

The first law pertaining to forest management service to owners of forest land was enacted in 1947. (Laws 1947, Chap. 580) The law applies only to owners of forest land in the State of not more than 1,000 acres. It provided for advice in management, selection and marketing of timber, and protection.

Actually, the work was begun in 1946 when a gift of \$8,000 from the Forest Industries Information Committee made it possible to employ two graduate foresters to assist small timberland owners and operators in the management of their woodlands. The demands for their services far exceeded their ability to take care of them.

Henry G. Weber, Director, Dies

On October 1, 1948, H. G. Weber, Director of the Division of Forestry since 1939, died of a heart attack. He had become an outstanding leader among foresters and one looked to for his sound judgment and unbiased opinions. He devoted his best energies to the furtherance of forestry work in the State. He served his profession with pride and courage and loyalty. In time to come, the people of Minnesota would pay grateful tribute to him for his accomplishments.

Clarence Prout Appointed Director

Clarence Prout, Deputy Director of the Division at the time of Mr. Weber's death, was appointed Director by the Commissioner of Conservation, Chester S. Wilson, on October 13, 1948. Mr. Prout graduated from the Eveleth High School, attended the Eveleth Junior College of the University of Minnesota for two years, and in 1923 graduated from Iowa State College at Ames with a B.S. degree in forestry. He began his forestry career with the Division of Forestry in 1925 as a forest patrolman in the Hibbing district, serving subsequently as silvicultural investigator, assistant in public relations work, forest assistant, and forester in charge of timber management. In 1944 he was appointed Deputy Director for the Division.

Previous to his employment by the Minnesota Forest Service, Mr. Prout worked on timber reconnaissance and land classification for the Massachusetts State Forestry Department on a forest survey of the Berkshire Hills. He also worked as a forest guard on the Superior National Forest, as tree surgeon, miner, rod man on a survey crew, and athletic director at a settlement house in Chicago. His experience included supervision of timber management

for the Division in directing timber survey crews, timber marking, and the formulating of management plans for state forests. Mr. Prout had been in charge of timber stand improvement work, logging, road construction, and the study of the reestablishment of black spruce, cutting methods, and the cost of selective logging. He was experienced also in fire fighting and during bad fire seasons had been assigned to fire areas in an advisory capacity.

On January 1, 1954, Clarence Prout was appointed Deputy Commissioner of Conservation.

Edward L. Lawson, Appointed Deputy Director, then Director

On September 1, 1951, Edward L. Lawson was appointed Deputy Director of the Division of Forestry, a position covered by Civil Service. Mr. Lawson graduated from the University of Minnesota School of Forestry in June, 1927, with a B.S. degree in forestry. He began his career with the Division that same year as a patrolman in the Tower district. A veteran of both World War I and World War II, he served during the latter in Saipan and the Mariana Islands in the 783rd heavy bombardment squadron as a combat intelligence officer, attaining the rank of captain.

His forestry experience included land classification, the Hubbard County Land Economic Survey, timber inventory and land acquisition projects. He was in charge of the ground work for the establishment of 11 of Minnesota's state forests. From 1934 to 1937 he was in charge of field crews in the inventory work of a forest survey of the states of Minnesota, Wisconsin and Michigan, for the Lake States Forest Experiment Station, U. S. Forest Service, St. Paul.

Mr. Lawson returned to the Division of Forestry on July 1, 1938, and was on forest management work and special assignments, including forest utilization studies, silvicultural practices, and forest fire fighting in emergencies. In 1946 he was put in charge of forest management. The duties consisted of organizing some 4,100,000 acres of state lands under a program of sustained yield management. As Deputy Director he was placed in charge of all personnel matters for the Division. On January 1, 1954 he was appointed Director of the Division. He retired as Director on January 1, 1963. On the fourth of July, 1965, Mr. Lawson died suddenly of a heart attack.

Christmas Tree Tagging Law Repealed

The Christmas tree tagging law was administered for the Division by Ray Clement, forester in charge of nurseries and planting. The law which required all Christmas trees to be tagged was repealed by the Legislature of 1949, and a new law was enacted which required a transportation permit to be issued by the Director of Forestry, the written consent of the owner of the land from which the trees were to be cut, and the posting of notices of the locations where the trees were cut on all lands or concentration points. (Laws 1949, Chap. 546) It eliminated the income from tags, which had amounted to nearly \$200,000 during the 14-year period the tagging law was in effect. It also relieved the Division of the intensive policing necessary under the tagging law.



M.F.S. Supervisors' Meeting in Bemidji, Minnesota, 1951.

The \$200 license fee for processed trees remained in effect.

School Forests Authorized

Although hundreds of small school forests had been established from time to time, it was not until 1949 that the establishment of school forests by any school district in the State, the University of Minnesota, teachers colleges, junior colleges, or other public educational institutions was authorized by legislative act. (Laws 1949, Chap. 431)

The law authorized the use of the lands owned by the school, acquired by gift or purchase, as well as tax-forfeited lands conveyed by the county or the Commissioner of Taxation. Proceeds from the sale of timber on the land were to be paid into the treasury of the governing agency and could be used for maintenance of the forests or for additional purchase of lands. Management plans covering the forests are subject to the approval of the Commissioner of Conservation. One by one, such forests were established over the years.

Norway Pine Designated Official Minnesota State Tree

On February 18, 1953, the Governor signed the bill which made the Norway pine Minnesota's official state tree. (Laws 1953, Chap. 201) During the early period of Minnesota's statehood, the white pine without question would have received a majority vote. Today the Norway pine, because of its resistance to insect and disease attack, as well as to fire, its beauty, its lumber quality, its desirability in reforestation, has become the tree of tomorrow.

Federal Lands Granted to State in Lieu of Deficiencies in Grants

The 1953 Legislature empowered the Commissioner of Conservation to select and to accept on behalf of the State, with the approval of the Executive Council, any grants or patents of land issued by the United States to the state which the commissioner deemed suitable, in lieu of any deficiencies which may have occurred in grants of school lands or other lands heretofore made to the state under any Act of Congress. (Laws 1953, Chap. 382)

Chengwatana State Forest Established

A new state forest, named the Chengwatana, was established in Pine County by the Legislature of 1953. (Laws 1953, Chap. 292) The lands comprising it lie west and south of the Kettle River and west of the St. Croix River. This brought the total number of state forests to 33.

Nursery Law Amended

The nursery law was amended by the Legislature of 1953 to permit the Division of Forestry to furnish nursery stock free of charge for use in any auxiliary forest owned and maintained by any corporation organized for religious, social, moral, educational, scientific, benevolent, charitable, fraternal, or reformatory purposes and not for profit. (Laws 1953, Chap. 580) This permitted the supplying of planting stock to such organizations as the Boy Scouts of America and other similar owners of lands which had been established as auxiliary forests.

Tax Reduction on Swamp Lands

A law was passed by the 1953 Legislature which

provided that any owner may be accorded a tax reduction upon such of his lands as are comprised mainly of swamp or marsh for a period of 15 years if he agrees to reserve such lands to the State for the purpose of developing wildlife habitat, and for public hunting grounds for the full period designated for such tax reduction. (Laws 1953, Chap. 688) It provided further that *swamp* or *marsh* lands meant only such lands as were not capable of producing merchantable timber or other marketable forest products. The owner's application required the approval of the county board as well as the Commissioner of Conservation.

Blister Rust Control Transferred to Agriculture

All powers and duties heretofore conferred on the Director of the Division of Forestry of the Department of Conservation, relating to the control of white pine blister rust, were transferred to the State Commissioner of Agriculture, Dairy and Food by the Legislature of 1953. (Laws 1953, Chap. 711)

State Forest Development Account Established

Beginning July 1, 1953, under a law passed by the legislature of that year, the State Auditor and the State Treasurer were required to keep a separate account of all receipts from the sale of timber or other revenue from state forest trust fund lands, to be known as the *State Forest Suspense Account*, specifying the trust fund lands from which the receipts were derived. (Laws 1953, Chap. 741) After the close of each fiscal year the Commissioner of Conservation, with the approval of the Commissioner of Administration, determines and certifies to the State Auditor and State Treasurer the total costs incurred by the State for the protection, improvement, administration, and management of such state forest trust fund lands for forestry purposes. Thereupon the State Auditor and State Treasurer distribute the receipts credited to the State Forest Suspense Account during the fiscal year as follows:

- (1) An amount equal to 25 percent of the costs incurred for the above purposes is transferred to a special account known as the State Forest Development Account.
- (2) An amount equal to 75 percent of the costs incurred is transferred to the General Revenue Fund.
- (3) The balance of the receipts is transferred to the trust funds concerned in accordance with their respective interests in the lands from which the funds were derived.

All moneys credited to the State Forest Development account are appropriated to the Division of Forestry for the purpose of planting, stand improvement, and forest development of such state forest trust fund lands.

White Pine State Forest Established

The number of state forests in Minnesota was increased to 34 in 1955 with the establishment of the White Pine State Forest in Aitkin County by the Legislature. (Laws 1955, Chap. 183)

Forest Fire Protection, 1954

The Division of Forestry was responsible for the protection of 17.5 million acres of forest land from fire at this time. In spite of the improved fire record the preceding few years, large losses from fire were still sustained each year. The level of protection in Minnesota could therefore not be considered adequate.

The protection of forests in Minnesota from fire had become a matter of public concern. Fires were recognized as a detriment to the future value of forest lands, and it was acknowledged that provisions for adequate fire protection must be included in any comprehensive land management program.

Considerable progress in fire control had actually been made during the past years through the regular ranger force, the farm foresters, and such cooperators as Keep Minnesota Green, Inc., the Bureau of Information of the Department of Conservation, as well as other organizations and interested individuals. The use of radio had become one of the most important factors in improving the effectiveness of the fire protection organization. Continuous radio service was now possible between area headquarters and outlying stations, administrative mobile units, lookout towers, and even with crews on fire lines.

The following is a list of the major items of fire fighting equipment in service in 1954:

Trucks, power wagons, and jeeps	240
Automobile, administrative	19
Trailers (tankers, utility, etc.)	144
Fire plows, heavy duty	116
Pumpers, mechanical, powertakeoff, etc.	435
Firebreak graders and road patrols	27
Bulldozers	19
Tractors, crawler and wheel-type	57
Fire hose	157,000 ft.
Pump tanks	4,500
Fire axes	5,000
Fire shovels	7,000
Fire tools, Pulaski	200
Power boats, fire patrol & motors	28
Water tanks, 50 to 400 gal.	423

Radio Equipment:

Area headquarters, fixed stations	14
Ranger " " "	41
Mobile units, trucks, cars, patrol boats	100
Pack-type units, towers & aircraft, and walkie-talkie units, portable fireline use	157

With the growing use of radio communication in forestry activities, a reduction was being made in the number of forestry-owned telephone lines; entire lines, or sections of lines, were offered for sale on bid, and usually local telephone companies were the successful bidders. When no acceptable bids were received, the lines were dismantled and salvaged.

Timber Administration and Forest Management

State-owned forest land for which the Division of Forestry was responsible in 1954 totalled 4,100,

000 acres. The timber on these lands constituted one of the most valuable resources of the State. During the 1953-1954 biennium, the volume of forest products cut from the state-owned land averaged 222,000 cords per year and produced an average annual income of \$731,348.00.

It was apparent that more access roads would be necessary to harvest timber in areas still inaccessible. In addition to the \$250 timber sale and the large auction sales, it was deemed necessary to have medium sized sales of timber up to \$800 in valuation, and it was planned to introduce a bill in the next legislature for that purpose.

Nurseries and Planting

The two state tree nurseries operated by the Division of Forestry; namely, the Badoura Nursery near Akeley, and the General C. C. Andrews Nursery near Willow River, had a combined inventory of 90 million trees by 1954. Tree distribution in 1953 amounted to nearly 11 million, of which about four million were planted on private land and about seven million on public lands. The income from the sale of trees was \$37,556.00. In 1954 the total distribution was 11.5 million trees. Due to an increased demand for trees for planting on privately-owned land, nearly five million trees were sold to private land owners. The balance of nearly seven million were planted on public areas, such as state, county, school, and municipal lands, and along state highways. The income in 1954 was \$47,489.00.

Private Forest Management Service, 1954

Approximately 4,600,000 acres of forest lands in Minnesota were in small private woodlands, owned by 180,000 individual owners. By this time the Division of Forestry had six trained foresters whose duties consisted of assisting these forest land owners in managing their woodlands according to good forestry practices. The demand for their services continued to increase far beyond their ability to take care of all requests.

Christmas Trees

It was estimated by the Forest Products Industries Information Committee that Minnesota's production of Christmas trees totalled 5.5 million in the year 1952, and nearly six million in 1953. It was noted that the Minnesota State Tree, the Norway pine, had become a favorite as a Christmas tree, and was commanding a good price for good specimens. Planted trees had also begun to reach the market.

Tree Farms

Under the sponsorship of the Keep Minnesota Green, Inc., organization, and with the cooperation of the field foresters of the Division of Forestry, a Tree Farm program was established in Minnesota as a part of the American Tree Farm System. The cooperation consisted of conducting inspections and preparation of management plans for the prospective tree farmers. By June 30, 1954, tree farms established in Minnesota numbered 328, covering 356,000 acres of land. By 1965 there were 1,630 tree farms taking in 735,270 acres of land.

Forest Insects and Diseases

Serious consideration was given to the protection of Minnesota's forests against harmful insects and diseases, and to this end the Division of Forestry cooperated actively, with the State Entomologist and the University of Minnesota in combating insect and disease epidemics.

The forest tent caterpillar epidemic which had ravaged northern areas of the State had decreased to a great extent by 1954 and was considered past its peak. Parasitism by the gray fly, as well as starvation because of foliage conditions, were important factors in this decrease.

The larch sawfly infestation increased during the 1953-1954 period and surveys indicated that in the near future there would be a serious epidemic of spruce budworm and jack pine budworm.

In cooperation with the State Entomologist and the University, field men of the Division of Forestry assisted in making detection surveys to provide a means of locating incipient outbreaks of insect or disease epidemics, and appraisal surveys to determine the extent of the developing outbreaks and the need for remedial action.

\$800 Timber Sales Authorized

The 1955 Legislature authorized the Commissioner of Conservation to make auction sales of timber up to \$800 in appraised value, at the county seat in the county in which the timber was located. The law provided that any purchaser may have only one permit in effect at one time. This filled the need for sales larger than the \$250 permits and less than the large auction sales of timber. (Laws 1955, Chap. 329)

Leasing of Swamp Lands for Harvesting Christmas Trees

The Commissioner of Conservation was empowered by the 1955 Legislature to lease any state lands under his jurisdiction for the purpose of cultivating and harvesting stagnant swamp trees for Christmas trees or other decorative purposes. (Laws 1955, Chap. 805) Such leases were to be offered at public sale under the same proceedings as provided for the sale of state timber. No lease had been consummated by 1959.

Chester S. Wilson Resigns as Commissioner

At the end of his second six-year term as Commissioner of Conservation, on March 15, 1955, Chester S. Wilson submitted his resignation to the Governor. Mr. Wilson had been commissioner since March 15, 1943, for a longer period than any other commissioner, either in Minnesota or any other state.

Clarence Prout Appointed Acting Commissioner

Upon the resignation of Chester S. Wilson as Commissioner, Governor Freeman appointed Clarence Prout Acting Commissioner until a new commissioner had been appointed. Mr. Prout had been Deputy Commissioner since January 1, 1954.

Dr. George A. Selke Appointed Commissioner

On March 31, 1955, the Governor appointed Dr. George A. Selke of Minneapolis as Commissioner of Conservation, to succeed Mr. Wilson. Dr. Selke had been a staff member of the State Department of Education and the University of Minnesota, President of St. Cloud Teachers College, Chancellor of the University of Montana, Chief of the Division of Cultural Affairs of the U. S. High Command for Germany following World War II, and at the time of his appointment as Commissioner, he was the executive secretary to the Governor.

Forest Inventory Completed

For the first time in its history, the State of Minnesota had a complete inventory of its timber, located on 4,750,484 acres of state land owned or administered by the Department of Conservation in the forested area of the State. (*A Forest Inventory Report for State Lands in the Forest Region of Minnesota, July, 1955, Department of Conservation, Division of Forestry*) Such an inventory was completed and published in 1955. It was made possible by the use of IBM equipment. Minnesota had carried out many forest survey projects in past years. They ranged from very extensive line plot surveys to intensive 40-by-40 appraisals. Information gathered from the extensive surveys was too unreliable to break down beyond total volume and total acreage, by cover type. Many of the intensive surveys never were completed and very few were computed. Computation was a very lengthy and laborious process for which manpower and time were lacking. Now with International Business Machine computations, the job was done.

The field work was performed by the regular timber management staff of foresters, with the assistance of forest rangers and timber appraisers, under the supervision of Earl J. Adams, in charge of forest management, and under the immediate supervision of Richard L. Knox, timber management coordinator.

NEW REORGANIZATION OF THE DIVISION OF FORESTRY

A major change in the organization of the Division of Forestry was made in 1956. The resulting modified line and staff organization, in addition to improving staff coordination, permitted the establishment of clear and concise lines of authority and responsibility to the field operations for the administration of all established programs at the field level.

The chief advantages of the change were: 1) establishment of one line of control instead of several, and 2) the maximum use at all times of division personnel and equipment assigned to the operating group.

The Division had since its inception in 1911 operated on a functional staff basis in which a specialized staff for each function exercised direct control over the operating groups for its particular specialty. This was necessary because each function added to the Division was in itself a specialty in which the operating groups had little or no training.

The basic plan of the reorganization divided the functions of the Division into two sections: 1) State Land Management, which included all activities associated with state forest management, and 2) Cooperative Forestry, which included all activities dealing with cooperative forestry programs of the Division.

The reorganization of the field operating group was completed early the following spring, and resulted in the establishment of four Regions, with a Regional Forester in charge of each; 18 Administrative Areas, with an Area Forester in charge of each; and 74 Ranger Districts, with a District Ranger in charge of each. One of the administrative areas was located in Southeastern Minnesota.

The reorganization resulted in the following setup:

State Office Building, St. Paul

Director, Edward L. Lawson
Deputy Director - Earl J. Adams
Chief, State Land Management Section - Richard L. Knox
Chief, Cooperative Forestry Section - Emil G. Kukachka
Assistant Chief, Fire Protection - Don Wilson
Assistant Chief, Coop. Forest Management - John Childs
Assistant Chief, Forest Tree Nurseries - Ray Clement
Assistant Chief, Development & Recreation - Harold Ostergaard
Assistant Chief, Timber Management & Sales - C. B. Buckman
Executive Assistant - John L. Geer

Grand Rapids Supply Depot

Field Coordinator, Buildings & Equipment - A. K. Anderson
Field Coordinator, Coop. Forest Management - Frank Usenik
Field Coordinator, Development & Recreation - R. W. Hosfield
Field Coordinator, Management & Sales - Willard West
Staff Forester, Forest Inventory - Sid Rommel
Staff Forester, Forest Roads & Trails - Joe Gorence
Supervisor, Grand Rapids Supply Depot - George Parshall
Shop Foreman - L. L. Hink
Building Foreman - Hefter Welman
Radio Technician - Hugh Veit
Land Exchange Appraisers - Ray Matson & A. V. Keenan

Region I - Brainerd

Regional Forester - James Spangler
Ass't Regional Forester - George Rogosheske
Area Foresters:
Area 1 - Cambridge - John Kirkvold
Area 2 - Moose Lake - E. V. Gafvert
Area 3 - Park Rapids - Wm. F. Olson
Area 4 - Brainerd - C. H. Whiting
Area 5 - Faribault - H. H. Lemke

Region II - Bemidji

Regional Forester - J. H. Hubbard
Ass't Regional Forester - J. L. Angell
(Blackduck)

Area Foresters:

- Area 6 - Warroad - Dick Willems
- Area 7 - Baudette - V. B. Lofgren
- Area 8 - Bemidji - R. R. Elliott
- Area 9 - Blackduck - Roy Balsiger
- Area 10- Itasca Park - Frank Pugh (until July 29, 1957) - Joseph Mockford

Region III - Deer River

- Regional Forester - Mike Guthrie
- Ass't Regional Forester - H. J. Kitzrow (Hill City)
- Area Foresters:
 - Area 11 - Deer River - G. J. Licke
 - Area 12 - Hibbing - M. A. Rhodes
 - Area 13 - Hill City - Harold Schuppel
 - Area 14 - Littlefork - Dean Parmeter

Region IV - Cloquet

- Regional Forester - George Gaylord
- Ass't Regional Forester - E. E. Erickson (Orr)
- Area Foresters:
 - Area 15 - Cloquet - Otto W. Olson
 - Area 16 - Orr - Alex T. Gerber
 - Area 17 - Duluth - John Fritzen
 - Area 18 - Tower - J. G. Makela

Nurseries

- Field Coordinator - Willow River - Frick Kurki
- Nursery Superintendents:
 - Badoura Nursery - Akeley - LeRoy Hinds
 - Gen.C.C.Andrews - Willow River - John Hall
 - Carlos Avery - Forest Lake - Stanley Karp

Carlos Avery Nursery Transferred to Forestry Division

The Carlos Avery Nursery which was started as a 12-acre experimental nursery at the Carlos Avery Game Refuge during the CCC days in 1936, under the supervision of the Division of Game and Fish, was transferred to the Division of Forestry in 1956. Plans for development called for a nursery 60 acres in size, and producing ten million trees and special shrubs for game food cover each year. This nursery, located near Forest Lake, is in a more southerly location than the other two nurseries; namely, the Badoura and the Gen. C. C. Andrews nurseries. All three nurseries in the Department of Conservation were thus consolidated in the Forestry Division by this transfer.

Soil Bank Conservation Reserve Program

The Division of Forestry in 1956 entered into two agreements with the U. S. Forest Service, through the Regional Forester at Milwaukee, for cooperation in the federal government's Soil Bank Conservation Reserve Program. Under the provisions of these agreements, the Division of Forestry agreed to grow forest planting stock for use in the Conservation Reserve Program and to provide technical forestry assistance for the program. Both programs were financed by federal funds.

Nursery Expansion

Under the agreement for growing forest planting stock, the three nurseries of the Division of Forestry became engaged in an expansion and development program aimed toward producing 18 million 3-year-old seedlings annually by the spring of 1960 for the Conservation Reserve Program. Seeding for



These three veterans of the Division of Forestry retired in 1956. They are, l-r, Arthur F. Oppel, James C. Gannaway, and Anson E. Pimley.

this amount of planting stock was accomplished late in the fall of 1956.

With the completion of the fall seeding program efforts were immediately turned to additional land clearing in anticipation of the expanded areas which would be needed for the 1957 fall seeding program.

Technical Assistance Program

It was necessary for the State Agricultural Stabilization Committee to set up procedures, practices, specifications, and rates of cost sharing for the Conservation Reserve Program in Minnesota. It was not until early in 1957 that a review copy of the Program practices was presented by the state committee to the county ASC committeemen. The Division's farm foresters attended the county meetings and discussed the Division's technical assistance program.

Canadian Fire Cooperation

A meeting of representatives of the Forestry Divisions of the Province of Manitoba and the State of Minnesota was held in March of 1956 for the purpose of developing a cooperative agreement regarding the suppression of forest fires occurring along the international boundary. Under the resulting agreement, a common zone was understood to exist for approximately two miles on either side of the border. When a forest fire is discovered in this common zone, the protection agency which discovers the fire is to notify the agency in whose area it is burning, and take immediate action to fight the fire, and organize crews, until the other agency gets its men on the ground to take charge.

A similar agreement was in effect since 1947 between the State of Minnesota, Division of Forestry, the U. S. Forest Service, and the Province of Ontario Forest Service.

Three Veteran Foresters Retire

In June of 1956, three veteran members of the Division of Forestry; namely, Anson E. Pimley, Ar-

thur R. Oppel, and James C. Gannaway, retired from active duty.

Anson E. Pimley, known as *Pim*, in charge of forest fire control for the Division, had been with the Forest Service for 44 years. Arthur Oppel, known as *Ops*, and *Jim* Gannaway had each put in 37 years with the Service; Oppel in charge of special projects, and Gannaway in charge of state timber.

Each man was presented with a service citation by Commissioner George A. Selke, and in the absence of Governor Freeman, read a letter of greeting and congratulations from the Chief Executive. At the reception held in their honor, the 1911 Forest Service was represented by Wm. T. Cox and Dillon Tierney, State forester and Assistant State Forester at that time.

Representatives from the University of Minnesota, School of Forestry, the Lake States Forest Experiment Station, the U. S. Indian Service, other state departments, field men of the Division, and scores of others attended the reception held in the office of the Director of the Division of Forestry in the State Office Building.

With the retirement of these three veterans, there remained very few of the original staff of 1911 and 1912 when the Minnesota Forest Service was organized.

Forestry Legislation Enacted

\$800 Timber Sale Law Amended

The \$800 timber sale law was amended so that the sale was to be made to the person who bid the highest price for all the several kinds of timber, which meant that the bid was to be made to cover all of the kinds and species of timber advertised on the permit. (Laws 1957, Chap. 45) This amendment simplified the auction sale procedure, since the law before being amended required that bids had to be made separately for each species of timber.

Summer Homesites

The Division of Forestry was permitted, under the amended law, to lease lakeshore properties for summer homesites for ten years instead of the former limitation of two years. (Laws 1957, Chap. 136) About the same time, the rental rate was increased from \$10 per year to \$25 per year for summer homesites.

Closing Roads and Prohibiting Campfires

Authority was given to the Director of the Division of Forestry, with the approval of the Commissioner of Conservation, by the amended law to close roads and trails leading into any lands used for any conservation purposes in times of high fire hazard, except for essential travel, such as going to one's home. (Laws 1957, Chap. 201) The building of campfires, except by permit, was prohibited by the amended law in areas used for conservation purposes, at any time that conditions conducive to forest fire hazards existed, and to prohibit smoking except in places of habitation or closed vehicles equipped with an ashtray.

Timber Sales Records

The old method of keeping timber sale records, which had not been modernized and was the same one originally devised, was brought up to date and certain duplication of records was eliminated. It permitted the adoption of an efficient and modern tabulation machine system of bookkeeping, and simplified the entire method of keeping timber sales records. (Laws 1957, Chap. 202)

Scaling State Timber

Previously the law provided that timber was to be scaled where cut. The amended law permitted the Commissioner of Conservation, with the approval of the Surveyor General of Logs and Lumber, to designate another location. (Laws 1957, Chap. 278) This is necessary where log products are skidded directly to a sawmill which is set up adjacent to the area where the cutting is being done, and in the case of Christmas trees or boughs which are hauled to a central point for counting and weighing.

Arbor Day Designated

For many years Arbor Day and the attendant tree planting had been observed in Minnesota. The day was designated annually by the Governor. The Legislature of 1957 designated permanently the first Friday in the month of May as Arbor Day. (Laws 1957, Chap. 306) It encouraged the observance of that day by the public schools throughout the State and urged emphasis on the cultivation, planting and developing of trees and forest resources of the State. It provided that the Department of Conservation may assist and encourage the observance of Arbor Day by any school, group, or association requesting assistance.

Fire Fighters to go onto the Property of Others

An amendment to existing laws provided that authorized agents of the State and fire fighters may go onto the property of others and carry out customary activities necessary for fighting forest fires, such as setting back fires, plowing trenches, and removing fence wires to provide access to the fire, without incurring a liability to anyone, except for damages arising out of willful or gross negligence. (Laws 1957, Chap. 322)

Minnesota Tree Growth Tax Law Passed

The 1957 Legislature passed the so-called Minnesota Tree Growth Tax Law. (Laws 1957, Chap. 639) The Legislature did not deem the existing system of ad valorem taxes in Minnesota applying to forest lands as providing an equitable basis for taxation, which resulted in inadequate taxes on some lands and excessive tax-forfeiture on other lands. The tree growth tax law was designed to correct this. It declared the public policy of the State to be the encouragement of private forest land owners to retain and improve their holdings of forest lands upon the tax rolls of the State, and to promote better forest management of such lands by appropriate tax measures. The law was therefore enacted for the purpose of permitting privately-owned lands generally suitable for the planting, culture, and growth of continuous forest products to be taxed on the basis of the annual increase in value, in ac-

cordance with certain provisions, as specified by the new law.

Sampling Made of Twin Cities Wood-Using Industries

Early in 1957 the Division of Forestry completed a report on a project which consisted of a canvass of seven major industrial classifications in Minneapolis and St. Paul. (Report, *A Sampling of Twin Cities Industries Which Use Wood*, May, 1957) The purpose of the canvass was to locate markets for Minnesota forest products, particularly for low grade lumber, and also to assist in developing markets for wood products.

The report was intended mainly for use by the Division of Forestry personnel in marketing and utilization assistance to woodlot owners. The information, gathered from 337 possible wood-using industries, was summarized in narrative form and in tables. Recommendations for improving the marketing of forest products, especially the lower grades, were also made in the report.

Small Woodland Improvement Meeting (SWIM)

A meeting for the purpose of discussing management and production problems in farm and small forest ownership in the states of Minnesota and North Dakota was held in the auditorium of the State Office Building in St. Paul on September 4, 1958. The meeting was called by Arthur W. Greeley, Regional Forester, U. S. Forest Service, Milwaukee, Wisconsin, and was the fourth of 25 such meetings held throughout the United States. The two-state meeting was co-sponsored by E. L. Lawson, Director of the Minnesota Division of Forestry, and C. N. Nelson, State Forester of North Dakota.

Mr. Greeley pointed out that the recently released comprehensive study of the nation's forest situation, entitled *Timber Resources for America's Future*, highlighted the significant fact that three-fifths of the nation's commercial timberland consists of small holdings belonging to 4.5 million farmers and other private land owners. These holdings, averaging but 63 acres each in size, were not being managed in a way to meet the future wood needs of our country.

The forestry practices on most major industry holdings and public forest land were fairly satisfactory, but these forests alone cannot meet America's future demands for timber. Therefore the problem of stimulating better woodland production must be planned for the farm and small forest ownership areas.

Following the meetings all over the country, a complete report and recommendations were to be published.

Funds Appropriated for Distressed Areas

A special session of the state legislature was called by the Governor, June 23 to 26, 1958, for the purpose of providing funds through legislation for unemployment relief in certain regions of the State, particularly the Iron Range area.

The legislature appropriated \$1,500,000 to the Commissioner of Conservation to be expended for work

projects authorized by the law for the conservation of natural resources and property of the State not otherwise undertaken by reason of the unavailability of appropriated funds. The act provided that the appropriation was to be used to employ needy persons, except skilled and supervisory personnel, in areas of economic distress and to provide necessary materials and equipment therefor.

A great many forestry projects were accomplished through this means, and at the same time unemployment in distressed areas was alleviated. Roads and bridges were built for access to timber lands, timber stand improvement work accomplished, picnic tables and fireplaces for forest campgrounds constructed, and similar conservation projects which could not have been done without the special appropriation were completed. (Report to Governor Orville L. Freeman on Conservation Work Program, by George A. Selke, Feb. 24, 1959)

Fire Protection in Southeastern Minnesota

In 1958 the first intensive forest fire protection in Southeastern Minnesota, under the direct supervision of the Division of Forestry, became a reality in Winona and Fillmore counties. The control of woodland fires in this area had been handled previously by local fire protection organizations. At a meeting with the Winona County Board in February of that year, the plans of the Division were explained, and were accepted by the county board. Before fires occurred in the spring, township fire wardens were appointed, equipment placed, and identification cards issued to township cooperators. The lookout tower in the Whitewater area was repaired by adding new steps and landings, as well as new windows. Radio was installed in the tower, and for the first time fires were detected from this point and control action initiated.

Fire suppression activities were handled by the district forester at Lewiston, who had direct radio communication with the Whitewater lookout tower. Another district forester was placed in charge of protection in Fillmore county. General fire protection in Southeastern Minnesota was placed under the direction of the Area Forester at Faribault.

Division of Forestry in 1958

Administration

The reorganization of the Division of Forestry which was effected between August, 1956, and February, 1957, was an important step in the history of the Division. By this reorganization the Division's functional staff structure was replaced by a modified line and staff organization.

The new organization set up clear definitions of responsibilities and centralized control and field authority for all functions in the field operating group at regional and area levels. The Division's staff was regrouped into two sections: (1) State Land Management, and (2) Cooperative Forestry.

Plans for reorganization were under way for more than three years in order to make the change

with the least amount of disturbance of essential work schedules and location of personnel. The new organization has resulted in improved operations and has raised the morale of the field force.

Fire Protection

The Division of Forestry provided fire protection for 17,771,000 acres of public and private forest lands. During the preceding few years, very serious fire seasons prevailed, due to lack of precipitation. The fall season of 1956 was probably the most serious experienced in more than 20 years. The spring and fall fire seasons of both 1957 and 1958 were also extremely serious.

The acquisition of modern, mechanized fire fighting equipment had been a big factor in controlling dangerous fires by increasing the speed and efficiency of operation. The number of steel lookout towers had been increased to 117. The lookout tower network was connected by radio. A comprehensive fire plan was perfected. However, even though the Division had a vast amount of fire protection equipment, it was still below the minimum required theoretically to protect the millions of acres of forest land in the State.

Timber Sales

Since 1931 the Division of Forestry had had the important responsibility of the management of all state forest lands. During the fiscal year 1957 timber sale receipts were greater than for any year since these administrative responsibilities were assumed by the Division. Timber revenue from the sale of state timber for the fiscal year 1957 exceeded \$1,209,000. The volume of timber cut that year amounted to 362,000 cords. Small timber sales were increased to a peak of 3,083 permits. Due to a slow timber market in the fiscal year 1958, there were 2,398 small sales. Timber sales revenue for the fiscal year 1958 dropped to \$853,000. The volume of timber cut on state lands was 261,000 cords.

State Nurseries

The Division of Forestry operated three nurseries which produced tree planting stock for state, county, school and other public lands, and for sale to private land owners for windbreak, shelterbelt and conservation plantations. During the past two years approximately 35 million trees were distributed. Receipts from the sale of tree stock to private land owners amounted to \$89,785 in 1957, and \$106,259 in 1958.

Steps were taken to greatly increase the production of the three state nurseries. In the fall of 1956 an agreement for nursery expansion and development was entered into with the U. S. Forest Service for furnishing planting stock for the Soil Bank Conservation Reserve Program. The Division of Forestry accordingly was committed to grow and distribute annually 18 million 3-year-old seedlings by the spring of 1960. In line with this expansion, seeding for 38,600,000 conifer trees was accomplished during the fall of 1956, and 41,500,000 in the fall of 1957. This stock was to be available for distribution during the spring of 1960 and the spring of 1961.

State Land Tree Planting

The Division planted 9,361,000 trees on 6,376 acres of state land during the past two years. This was accomplished by the use of 34 tree planting machines owned by the Division. Under Title IV of the Soil Bank Act, the Division received matching funds for this tree planting program during 1958.

State Forests

There were 4,750,000 acres of state land in the forest region of Minnesota, of which 2,248,000 acres were within 34 state forests. These state forest lands were classified as follows: Trust fund lands, 1,366,000 acres; conservation area lands, 576,000; and acquired land, 306,000 acres.

The income from trust fund lands in state forests was distributed as follows: (1) an amount equal to 25 percent of the costs incurred by the State for protection, improvement, administration and development of such lands was placed in the State Forest Development Account, (2) an amount equal to 75 percent of the costs so incurred was transferred to the trust funds concerned, according to their respective interests in the lands from which the receipts were derived.

There were 834 summer homesites leased on lake-shore lands within these state forests. Such leases were now made for a period of ten years at an annual rental of \$25. The annual revenue had increased to nearly \$27,000.

During the past two years, more than 23,400 acres of tax-forfeited lands, under county jurisdiction but located within the boundaries of existing state forests, were turned over to the State for administration. Such lands were now classified as state forest lands, but 50 percent of the gross receipts were returned to the county and the local taxing districts.

Forest Management

Starting July 1, 1957, the ranger district was made the basic administrative unit for the planning and control of cutting and all other forest management operations. This change clearly fixed field personnel responsibility in forest management and greatly simplified management control.

In order to effect this important change, extensive timber surveys, based primarily on aerial photograph interpretation, were completed for each ranger district. This provided each district ranger with allowable cut information to guide the timber cutting program and assure an annual sustained timber yield for the future. As of June 30, 1958, there were 2,900,000 acres under intensive management, and 1,850,000 acres under extensive management. Sixty-one percent of the intensive survey was completed.

Lieu Lands Received from Federal Government

In 1857 and 1858 the federal government gave to the State two sections of each township for school purposes. When these sections were surveyed, it was found that there was a shortage of some 26,000 acres.

Just a hundred years later, in 1958, the State received from the federal government some 13,000 acres of land in partial payment of this shortage. Negotiations were pending for the balance of these so-called *Lieu* Lands.

Land Exchange

Under the land exchange law, state-owned lands may be exchanged for federal and privately-owned lands with the unanimous approval of the Land Exchange Commission. Under this law, it was hoped eventually to consolidate the State's holdings. Many exchanges were consummated.

Private Forest Management Service

Technical assistance and advice is given free to owners of less than 1,000 acres of forest land. This program consisted of aid in the management and protection of timber, reforestation, selection and marking of timber cut, measurement of products, and marketing of harvested products.

The management of small woodlands in Minnesota, which comprise nearly five million acres of forest land, controlled by more than 140,000 owners, is of extreme importance. These forest holdings affect water and soil conservation, recreation, and wildlife habitat. Moreover, they are the greatest potential source for all of our forest industries, now increasingly pressed for adequate supplies of quality wood. While these small woodlands yield a substantial amount of forest products, they could produce more under adequate management. At this time, the Division had ten foresters engaged in this work.

Watershed Program

The Division of Forestry was obligated through a working agreement with the U. S. Forest Service to participate in and provide forestry assistance on watershed projects when corrective forestry measures were needed on problem areas. Tree stock was furnished, guidance given in woodlot management, tree planting, and control of fires. Forestry personnel participated in field examination of 23 proposed watersheds, comprising an area of 1-3/4 million acres in Minnesota.

Soil Conservation Districts

In 1958 a memorandum of understanding between the Division of Forestry and the Soil Conservation Districts was agreed upon. The purpose of the agreement was mainly to encourage better woodland management and reforestation practices. An agreement was also entered into by the Division and the Soil Conservation Service of the U. S. Department of Agriculture for the purpose of clarifying operating procedures and to provide desirable guides with respect to technical services pertaining to forestry activities.

Forest Pest Control

Serious consideration was given to the protection of the State's forests against harmful insects and diseases, and the Division of Forestry cooperated actively with the state entomologist, the University of Minnesota, and the Lake States Forest Experiment Station, as well as with the Division of

Plant Industry of the State Department of Agriculture and the U. S. Department of Agriculture.

Youth Conservation Commission Forestry Camps

The YCC forestry camp, located at the General Andrews State Nursery at Willow River, was created by the Legislature of 1951. The Division of Forestry provided the work projects, and the wards assigned to the camp are principally employed in nursery work, such as seeding, weeding, transplanting, lifting, and packing planting stock. At other times they are assigned to timber stand improvement work, sawmill work, construction of snow fencing, making cement blocks for buildings, and clearing land for nursery expansion.

A second YCC forestry camp, located at Thistle-dew Lake, near Togo, was created by the Legislature of 1955. Work programs for this camp include tree planting, timber stand improvement, pruning, thinning, and similar types of projects.

A third camp was constructed in the St. Croix State Forest in 1959, located east of Sandstone in Pine County. The 14- to 16-year-old wards employed there are from the Red Wing Training School. Their work programs consist of planting site preparations, timber stand improvement, equipment maintenance, snow removal, and cutting browse for deer feed in the winter, and such other duties as cutting firewood for the forestry campground.

Keep Minnesota Green, Inc.

In this State, the Keep Minnesota Green organization has given outstanding public service through a fire prevention campaign, by the use of radio, television and newspapers for educating the public. Many counties in the State set up their county KMG organizations. These worked with the schools, 4-H Clubs, Future Farmers of America, Boy Scouts, Girl Scouts, and other conservation organizations. Keep Minnesota Green, Inc., also sponsors the Minnesota Tree Farm System.

Tree Farms

During Minnesota's Centennial Year, 1958, a goal was set and attained to have 1,000 tree farms by the end of that year. In this undertaking, the Division of Forestry cooperated with Keep Minnesota Green, Inc., and the American Forest Products Industries, Inc. The objective of the program is to maintain and improve the productivity of privately-owned woodlands.

Forestry Legislation in 1959

Dump Ground Fire Law

The 1959 Legislature passed the so-called dump ground fire amendment to the fire prevention laws. It permitted the Commissioner of Conservation, when necessary, to post and stop dumping in the area and to require those responsible for the dump grounds to establish and maintain a sufficient firebreak around the dump ground or take such other precautionary

measures as to prevent the spread of fires to adjacent forest land. (Laws 1959, Chap. 37)

Such dumps presented troublesome problems to forest officers, particularly since many dumps received little or no attention and were commonly set on fire to reduce the volume of waste material. They were a continual hazard as such fires frequently went out of control and spread to adjacent forest areas. Many thousands of dollars were spent annually by villages, towns and the State of Minnesota, Division of Forestry, for suppression costs.

During the 1958 fire season, 31 dump ground fires burned over 975 acres of land, and caused a total damage of \$14,449. One of the most destructive forest fires experienced in 1958 originated from a town dump northeast of the Pequot Lakes ranger district in the Brainerd area. It destroyed a summer home and endangered 11 others before it was brought under control.

Timber Laws Amended

The former maximum limit of \$250 in appraised value on small state timber sales was raised to \$350. This enabled the Division of Forestry to make timber sales with more volume on each permit and the State benefited since the larger sales cost less, proportionately, to administer. (Laws 1959, Chap. 385)

The timber laws were amended further to extend the time limit from 60 days to 90 days in which the purchaser of timber, under the \$800 timber sale law, had to furnish sufficient bond to the State. It made the bond provision uniform for both types of auction sales made by the State. (Laws 1959, Chap. 38)

Auxiliary Forest Law Amended

The Commissioner of Conservation was empowered to cancel any auxiliary forest contract if the owner had made successful application under the Minnesota Tree Growth Tax Law. The provisions of the amendment took the land out of the auxiliary forest, which is under the jurisdiction of the Division of Forestry, and placed it under the county board. (Laws 1959, Chap. 130)

For the purpose of simplifying operations, two or more auxiliary forest contracts held by one owner in any county may be consolidated into a single contract, as provided by an amendment to the auxiliary forest law. This reduced the amount of record keeping on auxiliary forest contracts. (Laws 1959, Chap. 561)

Memorial Forests, Lands Withdrawn from

An amendment was passed permitting the county boards to withdraw tax-forfeited lands from memorial forests and offer them for sale, providing the sale is approved by the Commissioner of Conservation. Heretofore, there was no provision in the law for the withdrawal of lands once they had been placed in a memorial forest, even though they were found to be more suitable for other purposes. (Laws 1959, Chap. 187)

Nemadji State Forest Boundary Changed

Area and boundary changes were made in the Ne-

madji State Forest. Certain lands were eliminated and others added. The changes were desired by the county board and were concurred in by the Division of Forestry. Agricultural lands were eliminated and others definitely suited for forest use were added. (Laws 1959, Chap. 176)

25-Year Peat Leases Authorized

Leases for the removal of peat from state forest land for a period not exceeding 25 years, with the approval of the Executive Council, were made possible by an amendment to the law, passed by the Legislature of 1959. This eliminated the necessity for negotiating leases for shorter periods. (Laws 1959, Chap. 473)

Acquisition of Administrative Sites

The limitation of \$1,000 for the purchase of administrative sites for area headquarters, ranger stations, tower sites, and other administrative sites, was increased to \$1,500. Sites with sewer and water connections can no longer be purchased for \$1,000 in communities where the Division of Forestry proposed to build headquarters. Since property costs have increased, it enabled the Division to acquire desirable sites when needed. (Laws 1959, Chap. 471)

Tax-Forfeited Land Laws Amended

The purpose of one of the amendments passed by the 1959 Legislature was to define *timber* so that the meaning of timber and timbered lands, as used in the provisions of the tax-forfeited land law, would include reproduction of all sizes and species, as well as merchantable timber.

The new law stated that *timber meant trees and reproduction thereof of every size and species, which would or might produce forest products of value, whether standing or down, and including, but not limited to, logs, bolts, posts, poles, cordwood, and decorative material.* Since the Division of Forestry must approve all county tax-forfeited land and timber sales, this legislation simplified the approval by setting up the definition of timber, and made it the same as it applied to state land sales. (Laws 1959, Chap. 185)

The limitation of \$250 for the sale of small amounts of green standing, dead, down, dying, insect infected or diseased timber from tax-forfeited lands was increased to \$500 in appraised valuation. Such sales are made by the county boards, except that the timber appraisals are approved by the Division of Forestry under a delegation order of the Commissioner of Conservation. (Laws 1959, Chap. 453)

A further amendment provided that classification and reclassification by the county boards of tax-forfeited lands need not be approved by the town boards if they are located within the boundaries of any organized town with taxable valuation in excess of \$20,000. The amended law stated that except as ownership of particular tracts of land should be held by the State or its subdivisions for a recognized public purpose and public access, it is the general policy of the State of Minnesota to encourage the return of tax-forfeited lands to private ownership and the tax rolls, through sale. (Laws 1959, Chap. 348)

1959 Legislature

Laws, Extra Session

Arson in Pine Forests Made a Felony

In order to strengthen the law regarding the willful burning of lands, a law was passed by the special session of the 1959 legislature which specified that every person who shall willfully burn over or cause to be burned over, any pine lands shall be guilty of a felony and punishable by imprisonment in the state prison for not less than one year or more than three, or a fine of not more than \$1,000, or both. At the next session of the legislature, an endeavor will be made to eliminate the word *willful* and the word *pine* so as not to confine it to pine lands. (Laws Ex. S. 1959, Chap. 86)

The passage of this law was a direct result of the Badoura fire of May 1, 1959, which was set deliberately, and which burned over 14,000 acres.

Lands Added to State Forests

By order of the Commissioner of Conservation, on October 28, 1959, state lands totalling 837,756 acres were reserved from sale and set aside for forestry purposes as state forest lands. Such lands were located in the 16 forest counties of the northern and northeastern part of Minnesota. At the 1961 Session of the Legislature, it was intended to have a law passed establishing these lands as specific state forests.

Clarence Prout Appointed Commissioner of Conservation

On March 1, 1961, Clarence Prout, Deputy Commissioner of Conservation since 1954, was appointed Commissioner of Conservation by Governor Elmer L. Andersen. Mr. Prout was a career man who had completed 35 years with the Department of Conservation, first in the Division of Forestry, where he attained the position of Director, then as Deputy Commissioner of Conservation. Dr. George A. Selke, who was appointed Commissioner in 1955 by Governor Orville L. Freeman, completed his six-year term in 1961 and resigned. He subsequently joined the staff of the Secretary of Agriculture, Orville L. Freeman, in Washington, D. C.

Division of Forestry Celebrates Golden Anniversary

The year 1961 marked the golden anniversary of the Minnesota Forest Service, as it was designated in 1911, the year of its founding. That was the year William T. Cox was appointed Minnesota's first state forester, and General C. C. Andrews as Secretary of the State Forestry Board. Mr. Cox died on his 83rd birthday, January 25, 1961.

While Minnesota's Forest Service was born in the decline of the fabulous lumbering era of the State, in the day of the river drives, wanigans and lumberjacks, the present Division of Forestry had entered into a new period of highly technical forest management practices, vast reforestation programs,

mechanized logging methods, and 50-million a year seedling production in its nurseries.

By proclamation of the Governor, the week of June 18-24 was declared *Forestry Week* in Minnesota. During that week forestry area headquarters and ranger stations held open house at which close to five thousand visitors were shown exhibits of equipment, displays and demonstrations. Newspapers and periodicals published articles publicizing the 50th anniversary of the Forest Service. All media were employed to publicize the event.

A reunion of some 1,200 present and former employees of the Division of Forestry and their families was held at the Itasca County Fair Grounds at Grand Rapids in the form of a picnic. Among those attending were three of the five living employees of the 1911 organization: Mike Guthrie, an original forest patrolman and now a Regional Forester; Percy Records, an original forest ranger; and Esther Bergstrand Oppel, one of the first two stenographers. The original Assistant State Forester, Dillon P. Tierney, and Anna Gillespie Byrne, the other stenographer, were unable to be present.

Forestry Legislation Enacted in 1961

Two New State Forests Established

During the 1961 legislative session the Minnesota Memorial Hardwood State Forest and the Golden Anniversary State Forest were established, which brought the total number of state forests in Minnesota to 36.

The Minnesota Memorial Hardwood State Forest extends from Hastings, just south of St. Paul, to the Iowa border for a distance of 120 miles, in the seven counties bordering the Mississippi River and its tributaries. Under multiple use plans, the scenic beauty of the bluffs along the route of the Great River Road, which was being constructed during this time, will be preserved. (Laws 1961, Chap. 521)

The Golden Anniversary State Forest is located in Itasca County. This 260-acre state forest was established in commemoration of the 50th anniversary of the Minnesota Forest Service of 1911, which is now the Division of Forestry of the Minnesota Conservation Department. The forest contains all age classes of the Norway pine, Minnesota's official state tree. (Laws 1961, Chap. 330)

State Forest Laws Recodified

State forest laws were recodified, thereby eliminating duplication, contradictions, and obsolete provisions, thus bringing them up to date. (Laws 1961, Chap. 223)

Timber Laws Recodified

Many of the older state timber laws were amended by eliminating duplications, contradictions, and obsolete provisions, while at the same time bringing the provisions of the law into accord with present administrative practices. This modernization of the timber laws strengthened administration of the timber resources of the State by simplifying law enforcement, accounting procedures, and field timber appraisal work. (Laws 1961, Chap. 202)

State Public Lands May be Sold for Forestry Purposes

Any state public lands, suitable for forest management, may be sold, under a new law, to be used exclusively for the growing of continuous forest crops, such sales to be subject to the approval of the Executive Council. The law further provided that not more than 1,280 acres may be offered in one parcel nor sold on any other terms than for cash. (Laws 1961, Chap. 658)

State Forest Dedicated Trust Fund Increased

Up to this time the law provided that the costs incurred by the State for the protection, improvement, administration and management of state forest trust fund lands for forestry purposes were to be deducted from the gross receipts collected from the sale of timber or other revenue from such state forest trust fund lands.

The net receipts are deposited to the various trust funds, but an amount equal to 25 percent of the costs is transferred to a special account, known as the State Forest Development Account. The remaining 75 percent of the costs incurred are transferred to the General Revenue Fund of the State. The law was amended by the 1961 Legislature to provide that the total costs shall be transferred to the State Forest Development Account. It was anticipated that this would result in increasing the dedicated funds available for forest development work from \$37,000 to about \$150,000 each year, thereby making possible the acceleration of the program of planting and development on state forest trust fund lands. (Laws 1961, Chap. 571)

Constitutional Amendment Proposed to Consolidate Permanent School and Swamp Land Funds

An amendment for the approval of the people of the State of Minnesota at the next general election in 1962 was proposed for the consolidation of permanent school and swamp land funds and regulating their investment. (Laws 1961, Amendment No. 1)

\$1,500,000 for Conservation Work in Depressed Areas

One of the first laws enacted by the 1961 Legislature was an act for an appropriation of \$1,500,000 for conservation work projects in the depressed areas of the State. The depressed areas which had a high rate of unemployment, depressed business, and substandard agricultural conditions, were mainly in the Iron Range communities and the northeastern part of the State. The purpose of the law was similar to the one passed at the Extra Session of the Legislature of 1958.

The appropriation of \$1,500,000 provided relief for unemployed persons and at the same time resulted in the accomplishment of much needed conservation work projects. (Laws 1961, Chap. 21)

Nullification of Commissioner's Order #23 Attempted

A bill which the Division of Forestry opposed was introduced in the 1961 Legislature for the nullification of Conservation Commissioner's Order No. 23 of October 28, 1959, which established 837,756 acres as state forest lands under provisions of M.S.A. 89.01. (The bill covered 830,116 acres.)

At the time the bill nullifying the order was introduced, millions of trees had been planted on the area, and many miles of forest roads had been established. Under the emergency conservation work program just passed into law by the 1961 Legislature additional development of the lands was planned or already under way.

Much of the land covered by Commissioner's Order #23 was trust fund land, a large portion of which had stood idle for a hundred years. Had the bill been passed, these lands would have returned to their previous no-management status. (1961 Legis., HF 1102)

The Division of Forestry in 1962

At this time, the commercial forest area within the State was about 18 million acres. Of this, 56 percent was in public ownership, and 44 percent was in private ownership. The State itself owned about 3.5 million acres of commercial forest land, which was administered by the Department of Conservation. The Division of Forestry, which in 1961 celebrated the 50th anniversary of its establishment, had the responsibility for the protection and management of the timber resources on such land.

Forestry ranked as one of Minnesota's *big four* industries. Timber cut in Minnesota in 1961, with value added to the raw material by harvesting, processing, transportation and distribution, amounted to almost a quarter of a million dollars. With material demands of the State's economy constantly growing, the forest resource promised an even greater contribution.

The multiple use principle of forest management had generated new wealth in such fields as wildlife, outdoor recreation and travel. Unlike many natural resources, the managed forest knows no depletion; it is forever renewing itself while providing products for good living for all.

Administration

On July 1, 1962, the Division was reorganized into three Regions, with 16 administrative areas, and 84 districts. The Division had a total complement of 273 permanent personnel during the biennium, in addition to 63 seasonal forest guards and 19 intermittent laborers. Approximately 1,500 to 2,000 persons were given employment on an hourly basis, which amounted to 368,000 man-hours, on such projects as nursery operation, planting, roads, trails and building. Fire fighters were needed for more than 165,000 man-hours for the suppression of fires.

The supply depot maintained by the Division at Grand Rapids continued to be a vital service facility to all projects. It is estimated that some 15,000 different supply and equipment items are stocked for distribution to the areas, nurseries, and St. Paul. The Division had more than 600 buildings of all types at this time, and 115 forest fire lookout towers, all of which require some type of maintenance. Nearly a thousand miles of forest roads and trails were maintained, 28 miles reconstructed, and eight miles of new road constructed.

Conservation Work Projects

An allocation of \$309,375 from the Conservation Work Projects Fund, appropriated by the Legislature of 1961 was received by the Division. The major portion of these funds was used for site preparation and planting, timber stand improvement, forest roads and trails, campgrounds, nursery development, blight rust control, and forest survey work. Less than \$4,000 was used for the purchase of tools and equipment.

State Land Management

State Forest Lands. Two additional state forests, the Golden Anniversary State Forest in Itasca County and the Minnesota Memorial Hardwood State Forest in the counties bordering the Mississippi River and its tributaries from Hastings to the Iowa border, were established by the 1961 Legislature. This brought the number of state forests in Minnesota to 36. They encompassed a state-owned land area of 3,039,496 acres.

These state forests will be continued on a multiple use development basis to insure perpetuation of all their natural assets. Income to the state treasury from leases and special use permits of all types, including summer cabin sites, commercial, hay and grazing, gravel, peat, rice, and various pole, pipeline and right of way permits amounted to \$32,815.10 for Fiscal Year 1960-61 and \$46,733.36 for Fiscal Year 1961-62.

State Land Timber Sales. Management responsibilities within state forests included timber sales administration. The fiscal years 1961 and 1962 were characterized by a below normal market demand for pulpwood and other forest products. As in other years, the volume of state timber harvested was considerably less than the recommended cut for sustained yield. Higher valued softwood products, such as white and Norway pine, jack pine and black spruce, did not present as serious a marketing problem.

Various research agencies predicted a substantial increase in the demand for forest products in the future. It became apparent, however, that the increased use of forest products was not developing as rapidly as desired. The contemplated addition of a marketing and utilization specialist to the staff of the Division was expected to bring about more complete utilization of available forest products from both public and private forest lands.

During Fiscal Year 1960-61, under all types of sales, 256,845 cords of timber were harvested from state land, bringing into the state treasury \$831,889.89. During Fiscal Year 1961-62 the total harvest was 222,664 cords, with an income to the state treasury in the amount of \$688,461.26.

Forest Management Planning. The compilation of state-wide inventory field data was completed in 1961, and a report printed which could be compared with the state-wide inventory information obtained five years previously. The data obtained have been of immeasurable value in establishing state land management procedures and policies. It showed conclusively that the gross timber growth on state land the past five years far exceeded the drain from mortality, natural causes, and harvest, and that state

forest lands are generally in better condition than they were five years previously.

Land Exchange. Land exchange applications were received in increasing numbers. During the previous biennium, 24 land exchanges were completed, and 25 were in the process of completion. Considerable time was spent in formulating long-range land exchange plans between the State and Federal Governments in the vicinity of the two national forests in the State of Minnesota, the Superior and the Chippewa. Since obtaining approval of the Land Exchange Commission in 1962, work was begun on specific land exchanges proposed in the vicinity of the Chippewa National Forest in accordance with these long-range plans.

Cooperative Forestry

Forest Fire Protection and Suppression. The Division of Forestry furnished fire protection to 17-3/4 million acres of public and private forest land. Except for the spring of 1962, the biennium was marked with a continued deficiency in snow and rainfall. During 1960, 1,080 fires occurred, and 1,441 fires burned in 1961. These two years were considered as bad as any in the 50 years since the Forest Service was organized. On the basis of moisture deficiencies, fire weather build-up and fire danger class, 1961 was the worst year on record. In spite of these facts, the record was far more favorable due to the use of improved techniques and the acquisition of modern fire fighting equipment.

The Division was fortunate in obtaining surplus government equipment through the General Services Administration of the federal government because of its participation in the federal aid forest fire protection program. The value of such equipment, which was received without cost, is estimated at \$93,000.

Although great strides had been made in the development and use of new fire fighting equipment, fire incidence remained high. A vigorous fire prevention education program was conducted, additions were to be made to the lookout tower system, and aircraft patrol was to be added to provide better fire detection. The Division's radio network was to be changed over to high frequency channels, and the staff trained in better law enforcement.

Cooperative Forest Management. A very important segment of the commercial forest land in Minnesota is in private ownership - primarily in small woodland holdings - 150,000 individual owners controlling nearly seven million acres of such lands. Technical forestry assistance furnished to such owners materially influences the long-term management of this important source of forest products. The service is provided by nine district foresters who are stationed in the southeastern part of the State.

Foresters in this program also cooperate in the Agricultural Conservation Program, the Small Watershed Program, and with the Soil and Water Conservation Districts. During 1962 three positions, which had been financed by Soil Bank Act funds, were added to the Division of Forestry complement and financed with matching funds under the Cooperative Forest Management Act.

The Agricultural Conservation Program made significant advances during the biennium. It was used on state and county forest lands for the first time as an aid in demonstration areas. With the curtailment of planting under the Conservation Reserve of the Soil Bank Act, the Division's nurseries appeared to have an over-production of nursery stock. By agreement with 25 county Agricultural Stabilization and Conservation Committees, the State supplied planting stock without initial payment by the tree planters, thereby moving over 13 million seedlings and eliminating the surplus.

In an effort to use every tool available to secure better forest management on private lands, the Division had been very active in the Tree Farm movement of Keep Minnesota Green, Inc., and the American Forest Products Industries. During the biennium, 165 parcels of land for certification by the Tree Farm committee were inspected.

State Tree Nurseries. Tree production was stabilized by the Division to three nurseries capable of producing 50 million trees annually for state, county, and school lands, as well as trees required for planting on private lands in the development of shelterbelts, windbreaks, woodlots, and for erosion control. The present total acreage of 417 acres at these nurseries provided an area sufficient to produce 35 to 38 million trees annually.

During the spring of 1961, more than 41 million trees were shipped for planting on public and private land. In 1962 the number of trees shipped was close to 37 million. This production is nowhere near the goal of 100 million trees, which is the recognized number that should be planted annually. It has been estimated that there are over a million acres of deforested and understocked lands in state ownership in need of planting.

Planting Program. Nearly 16 million trees were planted on 11,825 acres of state forest land during the biennium; 8,752,000 on 6,333 acres during Fiscal Year 1961, and 6,951,000 trees on 5,492 acres in Fiscal Year 1962. The number of trees planted was a 34 percent increase over the previous biennium. This was accomplished in spite of adverse weather conditions. More than 3,200 acres required site preparation. The fall of 1961 was so dry that only 560,000 trees could be planted - on sites where conditions were favorable. The spring of 1962 was extremely wet, making planting difficult or practically impossible in certain areas. Where trees were planted, however, the moisture resulted in one of the highest survival percentages in years.

The tree planting program on county lands was under the authority of Title IV and the Division cooperated in a reforestation plan in which all classes of forest land suitable for industrial wood production were eligible. Federal funds for 50 percent reimbursement were made available, and seven counties participated by planting 2,035,700 trees on 1,777 acres.

Forest Insect and Disease Control. During the biennium, the Division of Forestry and the Division of Plant Industry cooperated on a 12,625 acre spruce budworm spraying operation and a 4,200 acre pine tussock moth control project. The spruce budworm infestation continued to be severe in the northeast-

ern part of the State. The pine tussock moth defoliated approximately a thousand acres of jack pine in the General Andrews State Forest. About 600 acres of this jack pine was killed completely and had to be logged in order to salvage it.

Several experimental spray jobs with the antibiotic Actidione and Physiactin were performed in an effort to find a control for white pine blister rust, and the results appeared promising.

Auxiliary Forests, Memorial and School Forests. The acreage of privately-owned forest land under auxiliary forest contract increased from 244,404 acres to 261,582 acres during the biennium. Some contracts were cancelled and the lands placed under the Minnesota Tree Growth Tax law. A new contract covering 28,671 acres was consummated, more than offsetting the withdrawals. The auxiliary forest law is a step in the direction toward solving the problem of forest land taxation. Taxes received by the counties from auxiliary forest lands and yield taxes on timber sales amounted to \$35,782.14 in 1961, and \$41,400.18 in 1962.

Memorial forests established by various counties in the State embrace 968,442 acres. There are also 29 school forests in the State, covering 2,126 acres, and 6 municipal forests comprising 6,160 acres.

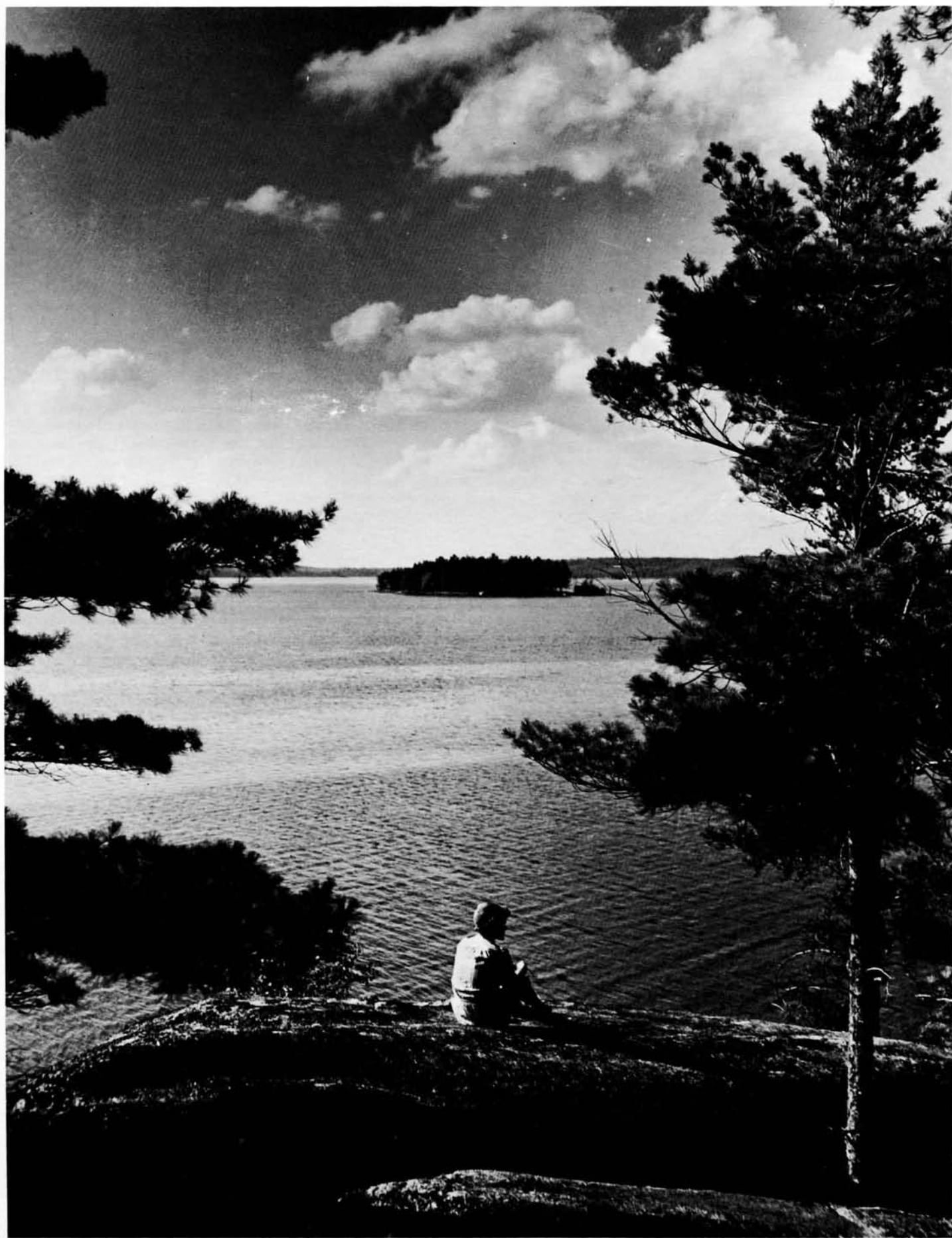
Forestry Legislation in 1963

State Forest Boundaries Re-established

One of the most important forestry laws enacted by the 1963 Legislature was the state forest boundary law. (Laws 1963, Chap. 332) It was the result of four years of study by Division of Forestry personnel. During the period, numerous meetings were held with interested individuals and groups to solicit suggestions. The many contacts made to consider the forest boundary problems resulted in several significant improvements now incorporated in the bill. County board resolutions were obtained in support of forest boundary changes within the last two-year period.

The following important factors were considered in the study of forest boundaries: (1) The percentage of state-owned land. (Where possible, scattered tracts were removed from state forests in the interest of more efficient management.) (2) The character of the state-owned land. (In some cases, lands better suited to purposes such as agriculture or other use, were removed from state forests.) (3) Long-range land exchange plans for consolidating state-owned lands. (Where possible, future land exchanges were anticipated in establishing forest boundaries.)

By the passage of the bill, some 373,000 acres of less concentrated state land was eliminated from state forest status, and 119,000 acres of more concentrated land was added to state forest status, making a total of 2,863,000 acres to be intensively managed as state forests. Since the passage of this



Beautiful Kabetogama State Forest was Re-established under the State Forest Boundary Law.

law, tax-forfeited lands turned over to the State by the counties for inclusion in state forests and additions to the Memorial Hardwood State Forest through acquisition have increased the total to 2,919,215 acres. The following state forests were established and re-established by this act: Badoura, Battleground, Bear Island, Beltrami Island, Big Fork, Birch Lakes, Blackduck, Bowstring, Buena Vista, Burntside, Chengwatana, Cloquet Valley, Crow Wing, D.A.R., Emily, Finland, Fond du Lac, Foot Hills, Gen.C.C.Andrews, Geo. Washington, Golden Anniversary, Grand Portage, Hill River, Huntersville, Insula Lake, Kabetogama, Koochiching, Lake Isabella, Lake Jeanette, Land O'Lakes, Lyons, Minnesota Memorial Hardwood, Mississippi Headwaters, Nemadji, Northwest Angle, Pat Bayle, Paul Bunyan, Pillsbury, Pine Island, Red Lake, Remer, Rum River, Sand Dunes, St. Croix, Savanna, Smokey Bear, Smoky Hills, Solana, Sturgeon River, Two Inlets, Wealthwood, Welsh Lake, White Earth, and Whiteface River.

Campgrounds in State Forests

The Commissioner of Conservation was authorized to establish campgrounds in state forests and to charge fees therefor by the passage of a law in 1963. (Laws 1963, Chap. 657) The fees were to be used

solely for the maintenance, operation and development of such state forest campgrounds.

At this time the Division of Forestry had 23 primitive type campgrounds in state forests. These campgrounds had been established about 25 years ago by the CCC's as a fire prevention measure to concentrate campers at established campsites, and to prevent indiscriminate camping by individuals throughout the state forests.

The tremendous rise in recreational use of the state forests created mounting forest hazards. Many of the campgrounds were entirely inadequate to accommodate the present amount of visitor use, insofar as maintenance and facilities were concerned. The moneys collected for camping fees under the new law were to be used to provide two or three days of maintenance per week and the necessary improvements, such as wells, which some campgrounds did not have.

Minnesota Outdoor Recreation Resources Act (MORRC)

The 1963 Session of the Legislature passed a bill known as the Minnesota Outdoor Recreation Resources Act. (Laws 1963, Chap. 790) This law provided for a tax of one cent per pack of cigarettes



Breathtaking View of the High Falls of the Pigeon River.

which was expected to raise a little over seven million dollars for its administration. It provided for a wide range of conservation projects, including reforestation, expansion of state tree nurseries, the construction and improvement of forest roads, the development of primitive campgrounds within state forests, the acquisition of land in the newly established Minnesota Memorial Hardwood State Forest, spawning area expansion, the acquisition and development of a large number of state parks, the development of historic sites, geological and geographic mapping, and certain types of aerial photography, a study of the Red River basin, and contributions to soil, water and watershed projects. The act gave impetus to the development of numerous recreation facilities within the State.

Wayne H. Olson Appointed Commissioner of Conservation

On June 12, 1963, the appointment of Wayne H. Olson as Commissioner of Conservation was announced by Governor Karl F. Rolvaag. He was to succeed Clarence Prout who was appointed by Governor Elmer L. Andersen. Mr. Olson who was first appointed to the Attorney General's staff in 1955 by Attorney General Miles Lord was assigned to the Department of Conservation as its Assistant Attorney General for two years, and at the time of his appointment as Commissioner was Chief Deputy Attorney General to Attorney General Walter Mondale.

Clarence Prout Remains with Department as Director of Division of Forestry

Upon the appointment of Wayne H. Olson as Commissioner, Clarence Prout was appointed to the vacant position of Director of the Division of Forestry. Edward L. Lawson had retired in January of 1963. The two appointments - Mr. Olson's as Commissioner and Mr. Prout's as Director of Forestry - became effective July 1, 1963.

Edward L. Lawson, Former Director, Dies

Edward L. Lawson, former Director of the Division of Forestry, who retired January 2, 1963, died of a heart attack on July 4, 1965. Although retired as Director, he was working on the Resource Conservation and Development Program (RC&D) on a temporary basis, interviewing wood-using industries in certain counties.

Many gifts were made in his memory. These gifts were turned over to the University of Minnesota School of Forestry by the family of Mr. Lawson, and a fund was established in his memory. In acknowledgment of the gift, the Regents of the University of Minnesota wrote thus: "The compassion of friends and family, neighbors and associates, in cherished memory of things past, of respect and gratitude felt, of lives and experiences shared, in tribute to the character and example of those remembered here. This living memorial in the name of friendship, love and understanding will perpetuate the spirit of those remembered and will encourage those at the University of Minnesota whose lives and work are dedicated to the betterment of mankind."

Forestry Legislation in 1965

Timber Laws Amended

The law in effect (M.S.A. 90.22) required that the purchaser of any state timber, before any timber permit to him became effective, had to give a bond to the State of Minnesota in double the value of all timber covered by the permit, and such bond had to be provided within 90 days from the date of purchase. If such bond was not furnished within 90 days, the down payment for the timber purchased forfeited to the State. Purchasers of state timber were finding it increasingly difficult to obtain the corporate surety bonds required, and at each legislative session there were claims for the return of the down payment because of inability to secure a corporate surety bond.

The Legislature of 1965 passed a law providing that in lieu of filing the bond as security for the issuance or the assignment of a timber permit, cash, certified check, or a cashier's check could be deposited with the State Treasurer. (Laws 1965, Chap. 38)

The Legislature also amended M.S.A. 90.34 so that the purchaser would not be required to pay interest charges for extension of timber permits or for late payment of timber invoices when such charges were \$1 or less. The costs incurred in collecting amounts of \$1 or less often were greater than that amount. Accounting procedures were greatly simplified through the change in the law. (Laws 1965, Chap. 337)

Date of Arbor Day Changed

Arbor Day, which had been observed on the first Friday in May since the law was passed in 1959, and most of the time before then, was changed to the last Friday in April by the Legislature of 1965. (Laws 1965, Chap. 405) Previous to 1959, the date was set by proclamation of the Governor, upon the recommendation of the Division of Forestry, and with few exceptions the day so designated was the first Friday in May.

Certain Land Acquisition by United States and Certain Land Exchanges by United States, Suspended

Notwithstanding any law to the contrary, until July 1, 1967, the Land Exchange Commission was prohibited by the passage of a law by the 1965 Legislature from approving the acquisition by the United States of land within the boundaries of the Superior National Forest in St. Louis, Lake, or Cook counties. (Laws 1965, Chap. 553) The law further prohibited the approval of any exchanges between the State of Minnesota and the United States in this area, and required that any exchanges already approved were to be held in abeyance until July 1, 1967. The prohibition did not apply to any exchanges with the State or private interests where the purpose of the exchanges was related to the development of taconite, semitaconite, copper, copper nickel, or nickel projects.

Involved in the matter were the Boundary Waters

Canoe Area controversy and the Voyageurs National Park on the Kabetogama Peninsula. The passage of the law provided time for further study of the land exchange program in all its phases.

Conservation Department Reorganization Proposed

The proposed reorganization of the Department of Conservation was one of the top controversies in the 1965 legislative session. It proposed to change the name of the department to the Department of Natural Resources. Under the lengthy bill there would have been two divisions instead of the present five; namely, a Division of Parks, Lands and Minerals; and a Division of Waters, Wildlife, Forests and Law Enforcement, each under the immediate charge of a deputy commissioner, in addition to various bureaus. (Legis. 1965, HF 838, SF 748)

The Department was not in favor of the bill. It was passed by the House and the Senate after numerous amendments, but failed to get the Governor's signature because the incorrect version of the oft-amended bill was presented to him on the final day of the Session.

State to Assume Share of Cost of Partition Fences in Memorial Hardwood State Forest

The law which provides that adjoining owners of lands shall share equally in the cost of partition fences between their lands, was amended to include the State of Minnesota with respect to all lands adjoining the Memorial Hardwood State Forest, to be paid for out of the Natural Resources Fund. (Laws 1965, Chap. 717)

Minnesota Outdoor Recreation Resources Act Amended

The MORRC act passed by the previous legislature was amended in 1965. (Laws 1965, Chap. 810) It provided for a study of the desirability and advisability of further land exchanges between the State and the Federal government, particularly with respect to the lands in the Chippewa and Superior National Forests. The Commission was also empowered to consider the desirability and worth of federal policies in the Boundary Waters Canoe Area. It provided that a study be made of timber cutting *natural area* policies in Itasca and other Minnesota state parks.

It appropriated funds for the Minnesota Memorial Hardwood State Forest Study. The study to be made under this appropriation will be a joint venture between the Department of Conservation and the University of Minnesota. Funds were also provided under the act for the purchase of land within the Memorial Hardwood Forest, and other hardwood forest areas.

Also included in the act were appropriations for tree planting and the construction of forest roads.

The act also set up additional state parks and added to existing parks, and provided for a wide range of conservation projects.

Timber Law Committee Appointed

Late in 1965, Commissioner of Conservation Wayne H. Olson asked the forest industry and the Un-

iversity of Minnesota to form a committee to study the timber laws with Department of Conservation representatives and to make such recommendations as they deemed advisable. The Committee consisted of five members: Dr. Alvin R. Hallgren, Chairman, from the University of Minnesota; two from Forest Industries' Information Committee, F. T. Frederickson of Boise Cascade Corporation and Ed. Gorman of St. Regis Paper Company; two from Minnesota Timber Producers' Association, Neil J. McKenna of Kimberly-Clark of Minnesota, Inc. and Walter R. Salisbury of Maurice J. Salisbury Co., Inc.; and two advisors, C. B. Buckman, Chief of State Land Management, and John Childs, Assistant Chief, Forest Management and Timber Sales.

Many contacts were made by individual committee members with loggers and others associated with timber activities. Ten recommendations were made to the 1967 Legislature and all were passed with a few minor changes.

National Forests in Minnesota

Chippewa National Forest

The Chippewa National Forest was established by an act of Congress, approved on May 23, 1908, and contained 190,000 acres of what had been known as Indian Reservation lands. The cutting policy set by acts of Congress in 1902 and 1909 provided that, except for ten sections reserved from cutting, virgin white and Norway pine was to be cut for the benefit of the Indians, with ten percent of the timber left for seed purposes.

At the time of its establishment, it was known as the Minnesota National Forest. In 1928 it was renamed the Chippewa National Forest. Its area has been increased to 1,313,787 acres as of June 30, 1964. (U.S.D.A. Forest Service Publication, National Forest Areas, June 30, 1964, P. 5)

Superior National Forest

The Superior National Forest lies within the so-called Arrowhead Country of Minnesota and embraces its famous canoe country. It contains a *wilderness* and *no-cut* area where no roads are permitted and airplanes are banned.

The Superior National Forest was established by proclamation of President Theodore Roosevelt on February 13, 1909. At that time it contained 909,734 acres. By June 30, 1964, it had been increased to 3,030,065 acres. (U.S.D.A. Forest Service Publication, National Forest Areas, June 30, 1964, P. 5)

During 1964-65 a controversy raged hotly concerning the cutting or prohibition of cutting in the so-called Boundary Waters Canoe Area. The *no-cut* area was increased in size by Orville L. Freeman, Secretary of Agriculture, following a report and recommendations made by a committee of which Dr. George A. Selke, former Conservation Commissioner, was chairman. The controversy, however, was by no means settled.

Organization of the Division of Forestry in 1965

From the half dozen employees which made up the office staff of the State Forester in 1911, the Division of Forestry increased to a staff nearly five times its size by 1965. The following personnel made up the Division St. Paul office:

Clarence Prout, Director
Elizabeth Bachmann, Secretary
Earl J. Adams, Deputy Director
Esther Harms, Secretary & Administrative Records
John L. Geer, Executive Assistant
Stanley B. Lockwood, Federal Aid Records Assistant
Dorothy Thon, Project Assistant
Gail Westing, Administrative Records
Linda Ross, Clerk-Typist

State Land Management

C. B. Buckman, Section Chief
Muriel Reitan, Secretary & Land Exchange Records
John Childs, Ass't Chief, Forest Management & Timber Sales
Dorothy Ewert, Secretary & Timber Sales Records
Lucille Smith, Timber Account Clerk
Willard E. West, Ass't Chief, State Forests & Recreation
R. W. Hosfield, Staff Forester, State Forests & Recreation
Gayle Tinney, Secretary & Land Acquisition & Lease Records
Robert Peura, Staff Forester, Forest Inventory
John Rodewald, Staff Forester, Forest Development
Andrea Boros, Secretary & Forest Development Records.

Cooperative Forestry

Emil G. Kukachka, Section Chief
Frank Usenik, Ass't Chief, Coop. Forest Management
Kathryn Utschinski, Secretary & Cooperative Federal Records
Erick Kurki, Ass't Chief, Forest Nurseries
Cleone Baskfield, Secretary & Nursery Records
Don Wilson, Ass't Chief, Fire Protection
E. W. Simons, Staff Forester, Fire Prevention & Law Enforcement
Helen Palecek, Secretary & Fire Records
George L. Rogosheske, Staff Forester, Utilization & Marketing

Field Supervisory Staff

Region I - Brainerd

James Spangler, Regional Forester
Clifford Carlson, Ass't Regional Forester
Area 1 - Cambridge
John Kirkvold, Area Forester
Philip Vieth, Ass't Area Forester
Area 3 - Park Rapids
N. W. Woollett, Area Forester
Loren Radke, Ass't Area Forester
Gerald Murphy, Ass't Area Forester
Area 4 - Brainerd
Arthur J. Ward, Area Forester
Richard Manly, Ass't Area Forester
Duane Moran, Ass't Area Forester

Area 5 - Lake City

George Hammer, Area Forester
Nathan Frame, Ass't Area Forester

Area 13 - Hill City

Henry J. Kitzrow, Area Forester
Archie Hakala, Ass't Area Forester

Region II - Bemidji

Arthur Keenan, Regional Forester
Otto C. Eggert, Ass't Regional Forester
Area 6 - Warroad
Wayne Hanson, Area Forester
Conrad Larson, Ass't Area Forester
Area 7 - Baudette
W. E. Richards, Area Forester
Robert Anderson, Ass't Area Forester
Area 8 - Bemidji
R. R. Elliott, Area Forester
W. A. Berndt, Ass't Area Forester
Area 9 - Blackduck
Joseph Mockford, Area Forester
Louis Lausche, Ass't Area Forester
Area 11 - Deer River
George J. Licke, Area Forester
Burton Peterson, Ass't Area Forester
Joseph Gummerson, Ass't Area Forester
Area 14 - Littlefork
Robert S. Story, Area Forester
Lloyd K. Boe, Ass't Area Forester
Eugene Jamrock, Ass't Area Forester

Region III - Cloquet

George Gaylord, Regional Forester
John Hall, Ass't Regional Forester
Area 2 - Moose Lake
Arthur Appledorn, Area Forester
Thomas Adams, Ass't Area Forester
Lawrence Gubbe, Ass't Area Forester
Area 12 - Hibbing
Ivan W. Holden, Area Forester
Arthur L. Aamot, Ass't Area Forester
Timothy Garvey, Ass't Area Forester
Area 15 - Cloquet
Joe T. Fabish, Area Forester
Dieter Ballack, Ass't Area Forester
Area 16 - Orr
Kenneth N. Anderson, Area Forester
Joseph Hudspeth, Ass't Area Forester
Area 17 - Duluth
J. G. Makela, Area Forester
Albert Jolicoeur, Ass't Area Forester

Grand Rapids Supply Depot:

George Parshall, Supervisor
A. K. Anderson, Equipment & Building Coordinator
L. L. Hink, Shop Foreman
Hefter Welman, Building Foreman
Leonard Swenson, Radio Engineer
Joseph Gorence, Staff Forester, Roads & Trails
Sidney Rommel, Land Exchange Appraiser
Harold Simon, Land Exchange Appraiser

Nurseries:

LeeRoy W. Hinds, Superintendent
Stanley E. Karp, Superintendent
Robert H. Strand, Superintendent

National Forestry Legislation

SUMMARY

Beginning in 1895 with a single employee - the Chief Fire Warden - whose salary was \$1,200 per year, Minnesota's Forest Service has developed into an organization employing upwards of 350 persons, of whom more than 50 are graduate foresters, and more are constantly being added under a forester-trainee program. It is now the Division of Forestry of the Minnesota Conservation Department. All its employees, with the exception of the Director, are under Civil Service. All are under a state employees' retirement plan. The Division receives an annual state appropriation and federal aid (Clarke-McNary, Soil Bank, Forest Development, and Resource Conservation & Development funds) of about 3.5 million dollars. From a one-room office in the State Capitol, the Division progressed to larger quarters in the Old State Capitol, then to the State Office Building, and since 1960 has been located in the Centennial Building, the third floor of which is occupied exclusively by the Department of Conservation.

The Division of Forestry has become a complex organization whose duties no longer are confined to fire protection and fire suppression, although they are still of prime importance. Manifold duties imposed on the Division by law include the management of state-owned timber, the operation of forest nurseries, the development of state forests, recreational area development, tree planting, forest management, private forest management services, forest research, utilization and marketing programs, land exchange, tree farms, forest insect and disease control, youth conservation forestry camps, and other state and federal cooperative projects.

Aerial photographs are available for the entire forest area of the State. The Division is equipped with hundreds of cars, trucks, tractors, power pumps, trailers, fire plows, bombardiers, radio communication, and all types of modern fire fighting equipment and techniques. Equipment of all kinds is on hand at the Grand Rapids Supply Depot. The Division has hundreds of ranger stations, warehouses, and residences. Hundreds of miles of roads and trails and bridges have been constructed through the state forests for access to timber, for recreation, and in case of fire.

The pioneer founders of the Minnesota Forest Service builded well. They had to overcome seemingly insurmountable obstacles, not the least of which were opposition and indifference. They endured hardships because of lack of money and manpower. They blazed the trail, and managed to lay a sound foundation for the structure of the present and for the future. The Division of Forestry takes pride in its past heritage. Today Minnesota's forests are recognized as one of the State's most valuable natural resources, and the Division of Forestry is dedicated to their development and perpetuation.

- 1876 - \$2,000 appropriated to employ a competent man to investigate timber conditions in the United States.
- 1886 - Act of June 30, created Division of Forestry in the Department of Agriculture.
- 1891 - President authorized to establish Forest Reserves; Yellowstone Park Timberlands Reserve proclaimed by President Harrison, March 30.
- 1897 - Present National Forest Act passed.
- 1901 - Division of Forestry becomes Bureau of Forestry.
- 1905 - Bureau of Forestry becomes Forest Service.
- 1908 - Minnesota (Chippewa) National Forest, Act of Congress, May 23.
- 1909 - Superior National Forest, Presidential Proc., Feb. 13.
- 1911 - Weeks Law passed. (36 Stats. Page 961) March 1.
- 1921 - Snell Bill and Capper Bill introduced in Congress.
- 1924 - Clarke-McNary Act signed by President, June 7. (Sec. 2, Fire Pro.; Sec. 4, Forest Planting Stock; Sec. 5, Farm Forestry Ext., 1944)
- 1928 - McNary-Woodruff Act, signed by President, April 30.
 - McSweeney-McNary Act, signed by President, May 22.
 - Watershed & Forest Mgmt. Exper. (45 Stat.699)
- 1930 - Shipstead-Newton-Nolan Law, Title 16, U. S. Code, Anno., Sec. 577, July 10.
- 1937 - Norris-Doxey Act, May 18.
- 1940 - White Pine Blister Rust Control (Lee Act, 1940) April 26.
- 1944 - Clarke-McNary Act, Sec. 5, Farm Forestry Ext. - Flood Prevention Act.
- 1947 - Forest Pest Control Act (61 Stat.177) June 25.
- 1950 - Coop. For. Mgmt. Act (64 Stat.473) August 25.
- 1951 - Soil Conservation Service (Memo #1278, Sec'y of Agri.).
- 1954 - Watershed Protec. (P.L. 46 and P.L. 566) August 4.
- 1956 - Soil Bank Act, May 28 (P.L. 540, Conservation Reserve Tree Production)
- 1957 - Agri. Cons. Program - Soil Conservation and Domestic Allotment Act.
- 1962 - Public Works Acceleration Act, September 14.

- Resource Conservation & Development Program, Sec'y of Agri. Memo #1515, November 2, under Food & Agri. Act, Sec. 102, P.L. 87-703.

- 1964 - Economic Opportunity Act (P.L. 88-452, 78 Stat. 508) August 20.
- Public Land Law Review Commission Established (P.L. 606) September 16.
- 1967 - Exchange of National Forest Lands with Public School Authorities (P.L. 90-171) December 4.
- Funds Authorized for continuing surveys of timber and other Forest Resources of the United States (P.L. 90-193) December 14.
 - Public Land Law Review Commission time extended for final report to June 30, 1970. Commission extended to December 31, 1970.

Clarence Prout, Director, Retires

On December 7, 1965, Director Clarence Prout retired from the Division of Forestry and from State service.

Mr. Prout, who grew up in Eveleth, has worked for the Division 40 years, as a silvicultural investigator, assistant in public relations and forester in charge of timber management. In 1944 he was appointed Deputy Director and put in charge of personnel. He was appointed Director upon the death of H. G. Weber.

Elizabeth (Betty) Bachmann Retires

On December 7, 1965, Betty Bachmann, Secretary to the directors of the Division of Forestry for 40 years, also retired from the Division.

Betty started with the Division at a salary of about \$125 a month (more than Clarence Prout, who, as a graduate forester, received \$90 a month). Betty is responsible for compiling *A History of Forestry in Minnesota*, as a sort of legacy to the forestry fieldmen; a responsibility she took upon herself.

Betty is well known for her articles published in the *Conservation Volunteer*, *The Naturalist*, *Nature* magazine, and others. She was awarded the Keep Minnesota Green Senior Forestry Award in 1957 and is listed in *Who's Who in Minnesota*, *Who's Who in the Midwest*, and *Who's Who of American Women*.

State Land Ownership Records Transferred to Computer System

In 1966 the Department of Conservation began transferring the ownership records of the land under its jurisdiction to the computer system. As of August, 1969, all Trust Fund and Consolidated Conservation Area lands have been processed. The Acquired Conservation land is being completed with the aid of the Iron Range Resources and Rehabilitation Commission. The date of completion is set sometime in 1970.

Jarle Leirfallom Appointed Commissioner of Conservation

Mr. Jarle Leirfallom took over the duties of Commissioner of Conservation on January 20, 1967, being appointed by Governor Harold LeVander. He succeeded Wayne H. Olson.

Mr. Leirfallom had been Welfare Commissioner from 1944 to 1955. An ardent outdoors man, he placed great emphasis on outdoor recreation.

Department of Conservation Reorganized

The Department of Conservation was reorganized in 1967 with the following divisions: Division of Lands and Forestry; Division of Waters, Soils and Minerals; Division of Game and Fish; and Division of State Parks and Recreation. (Laws 1967, Chap. 905) The Commissioner created a Division of Enforcement and Field Service.

As indicated by the division titles, the land portion of the former Division of Lands and Minerals was transferred to the former Division of Forestry.

The above reorganization provided for the Commissioner to appoint an assistant commissioner. The first Assistant Commissioner, Robert H. Rygg, took office in July, 1968, and is responsible for the supervision of the various Bureaus: Information and Education, Engineering, Planning, Business Management, and Boat and Snowmobile Registration.

Surveyor General of Logs and Lumber Department Abolished

The 1967 Legislature abolished the office of the Surveyor General to be effective July 1, 1967. All scaling duties were assigned to the Department of Conservation. All personnel in the classified service were also transferred to the Department of Conservation, Division of Lands and Forestry. (Laws 1967, Chap. 568)

Forestry Legislation in 1967

Railroad and Forest Fire Prevention

Changes in the railroad fire laws were necessary to make them applicable to diesel locomotives since the previous laws were intended for coal-fired, steam locomotives. (Laws 1967, Chap. 207)

Administration of Forest Fire Protection

Other fire laws were updated by changes in the wording. *Forest officer* replaced *forest ranger*, *forest patrolman*, or *fire warden*. *Commissioner of Conservation* was used in place of *Director*. (Laws 1967, Chap. 146)

State Timber Administration

The following ten acts in general give the Conservation Department more latitude in establishing procedures for timber harvesting and scaling.

Minimum cutting law repealed. (Laws 1967, Chap. 22) This law had been a serious handicap in the management of forest land. By prohibiting the cutting of trees smaller than certain specified size, regardless of health or condition, this law actually prevented foresters from prescribing the type of cutting methods recognized as necessary to prevent waste and bring about maximum growing conditions for other trees.

Timber cut because of error of State may be sold at single stumpage, informally. (Laws 1967, Chap. 23) Formerly, when timber was cut on a sale which later was found to be void through an error by the State, the man cutting the timber was charged with trespass.

Increased maximum appraised value for informal sales from \$350 to \$500; increased number of informal sales per person from one to two. (Laws 1967, Chap. 23) The purpose of this sale, which was established in 1939, was to make timber available to the small timber operator, seasonal work, and to provide a means of utilizing small tracts of timber. Increasing costs made it difficult for timber operators to plan economically for these small sales. The one-sale-at-a-time requirement interrupted his operation after cutting was complete and until the timber was scaled, delivered, and paid for.

Created a simple fuelwood permit. (Laws 1967, Chap. 25) Any growing forest not only has dead, down, or diseased trees that are a hazard to the forest, but also some living trees that are slowing the development of the preferred species. These trees should be removed, but in most cases the volumes are small and scattered and not of commercial value. However, on occasion, there are those who would, for a nominal fee, cut this type of timber for their personal fuel needs. A *Special-Use Permit* was thus created, and the Commissioner, for a \$5 fee, may issue a permit to salvage or cut not to exceed 25 cords of fuelwood per year for personal use from either or both of the following sources: (1) Dead, down, and diseased trees; (2) other trees that are of negative value under good forest management practices. Such permits may be issued for a period not to exceed one year.

Laws pertaining to identification of timber products during transit repealed. (Laws 1967, Chap. 26) The main content of the identification of timber products during transit laws was the requirement that loads of timber and manufactured timber products, whether public or private, be conspicuously marked while in transit with the point of origin and was passed attempting to stop the cutting of timber under trespass. Since 1941, willful trespass on timber has been relatively minor because of better timber management control.

Extended time for removal of cut products from permit area. (Laws 1967, Chap. 27) The timber laws formerly stated that all timber cut but not removed from the land at the time the permit expires becomes the property of the State. Occasionally, an operator, without negligence on his part, could not remove the timber before the permit expired. Weather and road restrictions were the main reasons. This amendment allowed the Commissioner to grant the permittee an additional 120 days beyond expiration of the permit for removal of the timber.

Powers of Executive Council in timber sales and permits transferred to Commissioner of Conservation. (Laws 1967, Chap. 66) The responsibilities of determining the number of sections or fractional sections of land to be covered by timber permits and the consideration of requests for auction timber permit extension formerly under the jurisdiction of the Executive Council, were placed under the authority of the Commissioner of Conservation.

Allow three auction sales of state timber in a county per year. (Laws 1967, Chap. 110) Under the State's present level of timber management, sales must be permitted more often in order to accommodate both the biological needs of the forest and to make better use of the market demands of the industry.

Bond requirements for auction sale permits reduced from 200 percent to 100 percent. (Laws 1967, Chap. 110) This 200 percent financial protection for the State was reduced to the actual amount of the sale, which, with the 25 percent down payment at the time of sale, was considered as ample protection.

\$800 auction sale law repealed. (Laws 1967, Chap. 110) With the amendments to the regular auction sale law, the need for a special section for small auction sales was eliminated.

Sale of Timber on Tax-Forfeited Land

This bill allows the counties to sell hardwood pulpwood on an estimate and without a scale. (Laws 1967, Chap. 90)

This act allows the county to sell timber on a mill or consumer's scale. (Laws 1967, Chap. 269) A written agreement is required between county and the purchaser of timber and the consumer. This written agreement requires approval from the Commissioner of Conservation. This act also allows for alternate landings for timber.

Tree Growth Tax Law

This was a minor amendment to the present law. The words *or ad valorem taxes* were inserted after *no penalties*. This applied to withdrawals from the Minnesota Tree Growth Tax Law when an agreement has been in effect for more than six years. (Laws 1967, Chap. 285)

Tree and Shrub Seed Law Amended

This act provided for the labeling of all tree and shrub seed which is sold, offered for sale, or exposed for sale, or transported within the State for sowing purposes. (Laws 1967, Chap. 133)

State Forest Boundaries

Updated state forest boundaries to include additional tax-forfeited land previously accepted by the Commissioner of Conservation and other land. (Laws 1967, Chap. 514)

Title of M.O.R.R.C. Changed

The title of the Minnesota Outdoor Recreation Resources Commission was changed to Minnesota Resources Commission, function of which is to provide the legislature with background necessary to evaluate. (Laws 1967, Chap. 867)

C. B. Buckman Appointed Director

The position of Director had been vacant since the retirement of Clarence Prout on December 7, 1965. However, the Division, being a well-trained organization and under the capable leadership of Earl Adams, Deputy Director, carried on until the appointment of C. B. Buckman on September 18, 1967, by

Jarle Leirfallom, Commissioner.

Additional responsibility had been transferred to the Division of Forestry by the 1967 Legislature. The lands from the former Division of Lands and Minerals is now a part of the Division of Lands and Forestry. (Laws 1967, Chap. 568) Mr. Buckman's background in land exchange and as Chief of the State Land Management Section had earned him the title of "state land expert."

Land Exchange Study

The 1967 Legislature appropriated \$50,000 for a Land Exchange Study under the overall direction of the Division of Lands and Forestry. (Ex.Session Laws 1967, Chap. 48, Sec. 48)

Mr. R. N. Cunningham was appointed as Chief Consultant and was assisted by Mr. Jacob N. Licke and Mr. Paul J. StAmant. An informal Land Exchange Advisory Study Group was appointed within the Division of Lands and Forestry and consisted of John Childs, Willard West, Richard Hultengren, and Director C. B. Buckman.

The Land Exchange Study Report was completed in 1968 and presented to the Governor and the 1969 Legislature. Copies were also sent to all interested parties. Many favorable comments were received on this fine study.

One of the things pointed out by this study was a critical need of a state-wide land use classification study of State and tax-forfeited lands before a comprehensive land use and disposal program could be effectively administrated. In 1968, Director of Lands and Forestry C. B. Buckman appointed Donald M. Carlson, Assistant Staff Forester, Special Land Projects, to supervise the project. The project was initiated on a pilot study basis in Aitkin County and parts of Beltrami and Itasca counties within the Chippewa National Forest. This study was published in a report entitled *Land Use Classification, Northern Minnesota*, dated June, 1969. Since the pilot study and as of August, 1969, the work has progressed into Becker, Beltrami, Crow Wing, and Lake counties.

Land Exchange Review Board Established

In July, 1968, a seven-man board was appointed by the Land Exchange Commission. (Laws 1967, Chap. 909) The Board is to meet regularly at quarterly intervals in February, May, August, and October of each year for current review and action on pending case transactions of all proposals for land exchanges. The seven-man Board consisted of:

Prof. Eugene P. Pfeleider, Chairman - U of M, Mpls.
Mr. Jacob N. Licke, Vice Chairman - Walker
Dr. Julius F. Wolff, Jr. - U of M, Duluth
Mr. M. J. Latimer - Grand Rapids
Mr. H. E. Westmoreland - Duluth
Mr. Herbert K. Anderson, Jr. - Virginia
Mr. John Swenson - Fergus Falls

The first meeting, an orientation meeting, was held in the Conservation Department Conference Room on October 24, 1968.

Keep Minnesota Green, Inc., Abolished

On March 8, 1968, the Board of Directors of

Keep Minnesota Green voted to dissolve the committee because of financial reasons.

A Minnesota Tree Farm Committee was formed with F. T. Frederickson of International Falls as Chairman. The first meeting of the Tree Farm Committee was held June 14, 1968.

Minnesota Lands and Forestry Advisory Committee Appointed

In April, 1968, a 12-man Advisory Committee to the Division of Lands and Forestry was appointed. This committee is composed of carefully selected specialists in the various forestry related fields to meet with key staff people when necessary to consider urgent Minnesota forestry policy and land use questions. The members of this committee:

Ed. Gorman, Chairman, Forest Industries Information Committee
Dr. Frank H. Kaufert, Director, School of Forestry
Clarence T. Eggen, U. S. Bureau of Indian Affairs
Harry M. Major, State Conservationist, U. S. Soil Conservation Service
A. M. DeYoannes, Commissioner, I.R.R.&R.C.
William Marshall, Land Commissioner, Itasca County
Marvin Smith, Extension Forester, Agricultural Extension Service
Marvin K. Lauritsen, Supervisor, Chippewa National Forest
Merlon England, Executive Secretary, State Soil & Water Conservation Commission
Richard A. Reinartz, Executive Secretary, State Technical Action Panel
M. R. Allen, Executive Secretary, Timber Producers' Association
F. T. Frederickson, Woodlands Manager, Boise Cascade Corporation

Division of Lands and Forestry St. Paul Staff Reorganized

Effective October 1, 1968, the St. Paul staff organization had been modified to include Administration and four principal operating sections.

Administration, headed by Earl J. Adams, Deputy Director; Technical Forestry Programs Section, Emil Kukachka, Supervisor; Forest Protection and Public Relations Section, Don Wilson, Supervisor; State Land Planning and Forest Management Section, John Childs, Supervisor; and State Land Leases, Sales and Land Records Section, Richard Hultengren, Supervisor.

Division of Lands and Forestry In September, 1968

From the half dozen employees that made up the office staff of the State Forester in 1911, the Division of Lands and Forestry has increased to a total office staff of nearly seven times its size by 1968. The following personnel made up the St. Paul office:

C. B. Buckman, Director
Dorothy Ewert, Secretary

Administration

Earl J. Adams, Deputy Director
Joanne Bixby, Secretary
Robert Story, Staff Forester, Special Projects
Leonard Hislop, Accounting Officer
(Vacancy), Staff Ass't, Accounting
David Johnson, Account Clerk
Sharon Wirkus, Secretary

Technical Forestry Programs Section

Emil Kukachka, Supervisor
Frank Usenik, Staff Forester, Cooperative & Private Forest Management
Kathy Utchinsky, Secretary
Erick Kurki, Staff Forester, Nurseries & Seed Development
Cleone Baskfield, Secretary
Robert Peura, Staff Forester, Marketing & Utilization

Forest Protection and Public Relations Section

Don Wilson, Supervisor
E. W. Simons, Ass't Staff Forester, Fire Prevention & Law Enforcement
Sherry Smith, Secretary

State Land Planning and Forest Management Section

John Childs, Supervisor
Willard West, Staff Forester, State Land Planning & Inventory, Land Exchange
R. W. Hosfield, Ass't Staff Forester, Forest Recreation
Eugene Karel, Ass't Staff Forester, Forest Inventory
Gail Westing, Secretary
Wayne Hanson, Staff Forester, Timber Sales & Reforestation
Andrea Boros, Secretary
Wm. Berndt, Ass't Staff Forester, Reforestation
Ruth Arnold, Secretary
Joe McCarthy, Staff Ass't, Timber Scaling
Linda Shattuck, Secretary

State Land Leases, Sales and Land Records Section

R. D. Hultengren, Supervisor
Donald Carlson, Ass't Staff Forester, Special Land Projects
Francis Miller, Staff Ass't, Chief Land Clerk
Leslie Brinkman, Land Clerk
Helen Kohout, Secretary
LuRae Peterson, Secretary
Shirley Yager, Secretary
Nancy Zacho, Secretary
Diane Bork, Secretary

DIVISION OF LANDS AND FORESTRY REGIONAL AND FIELD OFFICES REORGANIZED

On January 1, 1969, one Region, two Areas, and six Districts were added to the field administrative organization, making a total of four Regions, 18 Areas, and 92 Districts. The addition of these new administrative units resulted in a number of boundary changes and Area and District reassignments for administration. Since some administrative units needed to be renumbered, it was decided to renumber all units at this time following a consistent method which would indicate the location of the Region, Area, and District. This number would also be used

in any coding for electronic data processing. Each Region has a one-digit number, each Area a two-digit number, and each District a three-digit number, as follows:

1-Bemidji Region

11-Bemidji Area
111-Bemidji Dist.
112-Cass Lake "
113-Guthrie "
114-Itasca "
115-Roy Lake "
116-Bagley "

12-Warroad Area
121-Warroad Dist.
122-Clear River "
123-River "
124-Grygla "
125-Greenbush "

13-Baudette Area
131-Baudette Dist.
132-Birchdale "
133-Williams "

14-Littlefork Area
141-Littlefork Dist.
142-Int'l Falls "
143-Dentaybow "
144-Big Falls "
145-Pine Island "
146-Loman "

15-Blackduck Area
151-Blackduck Dist.
152-Kelliher "
153-Waskish "
154-Northome "

3-Brainerd Region

31-Brainerd Area
311-Brainerd Dist.
312-Onamia "
313-Little Falls "
314-Pillager "
315-Pequot Lakes "
316-Crosby "

32-Park Rapids Area
321-Park Rapids Dist.
322-Backus "
323-Nimrod "
324-Perham "
325-Smokey Hills "
326-Elbow Lake "

33-Hill City Area
331-Hill City Dist.
332-Jacobson "
333-Sandy Lake "
334-Aitkin "
335-Washburn Lake "

34-Moose Lake Area
341-Moose Lake Dist.
342-Nickerson "
343-Eaglehead "
344-Hinckley "
345-McGrath "

2-Cloquet Region

21-Cloquet Area
211-Cloquet Dist.
212-Cromwell "
213-Floodwood "
214-Alborn "
215-Cotton "

22-Deer River Area
221-Bowstring Dist.
222-Effie "
223-Rock Cut "
224-Thistledew "
225-Gr. Rapids "
226-Deer River "

23-Hibbing Area
231-Hibbing Dist.
232-Link Lake "
233-Side Lake "
234-Eveleth "

24-Orr Area
241-Orr Dist.
242-Kabetogama Lake Dist.
243-Crane Lake Dist.
244-Burntside "
245-Tower "
246-Cook "

25-Duluth Area
251-Duluth Dist.
252-Cloquet Valley Dist.
253-Two Harbors "
254-Finland "
255-Grand Marais "
256-Hovland "

4-Rochester Region

41-Lake City Area
411-Lake City Dist.
412-Lewiston "
413-Caledonia "
414-Preston "
415-Rochester "
416-Red Wing "

42-Mankato Area
421-Mankato Dist.
422-Slayton "
423-Gaylord "
424-Faribault "

43-Litchfield Area
431-Litchfield Dist.
432-Waconia "
433-Benson "
434-Alexandria "
435-Cold Springs "

44-Cambridge Area
441-Cambridge Dist.
442-Carlos Avery "
443-Zimmerman "
444-Mora "

Lands and Forestry Legislation in 1969

State Forest Boundaries Amended

The state forest boundaries were extended to include tax-forfeited lands accepted by the Commissioner of Conservation since the 1967 legislative session. (Laws 1969, Chap. 257)

The Snake River State Forest was a new forest. Lands comprising this forest were tax-forfeited lands that Kanabec County turned over by County Board Resolution to the Division of Lands and Forestry for management and contains 7,946 acres.

Certain Forestry Terms Redefined

The meaning of *Forest-Land* under Section 88.01 changed to coincide with the meaning in Section 89.001. (Laws 1969, Chap. 54)

Commissioner of Conservation Authorized to Establish, Develop, Maintain, and Operate Recreational Areas on Public Lands Under His Jurisdiction; and to Acquire Certain Interests in Lands in Connection with Trails

In addition to other lawful authority, the Commissioner may establish, develop, maintain, and operate recreational areas on public lands under his jurisdiction, including but not limited to campgrounds, day use areas, trails, and canoe routes, for the use and enjoyment of the public on any state owned or leased land.

The Commissioner may acquire by gift, purchase or lease, easements or other interests in land for trails and recreational uses related to trails where necessary to complete trails established primarily in state forests, state parks, or other public land under his jurisdiction. (Laws 1969, Chap. 190)

Amending Fire Laws

At the time this section (88.16) of the Forest Laws was enacted, it was often necessary that outside open fires be maintained for the purpose of heating water, most commonly used for washing clothing and scalding of hogs in home butchering; thus, it was felt that the removal of the words *except for domestic purposes* no longer relate the use of any open fire to the household. (Laws 1969, Chap. 410)

Also, the providing of an adequate burner to eliminate the possibility of creating wild fires from household refuse burning (Section 88.17).

Meaning of Service Rendered in Emergency Fire Fighting Clarified

The type of employment under the emergency fire fighting fund was clarified to exclude emergency fire fighters from unemployment compensation, thus making it unnecessary to keep certain additional records. (Laws 1969, Chap. 585)

Timber Laws Amended

Though the timber laws were changed quite drastically by the 1967 Legislature, so rapid was the

REGION 1: Arthur V. Keenan
Otto C. Eggert
Herman Radi
Area 11: R. R. Elliott
Dennis Ingvaldson
12: Thomas J. Adams
Conrad Larson
13: Wallace E. Richards
Robert Anderson
14: Duane J. Moran
Darwin Anderson
15: Joseph Mockford
Louis Lausche
Regional Forester
Reg. Staff Forester
Reg. Staff Forester
Area Forester
Area Staff Forester
Area Forester
Area Staff Forester
Area Forester
Area Staff Forester
Area Forester
Area Staff Forester
Area Forester
Area Staff Forester

REGION 2: Joe T. Fabish
Theodore L. Wilde
Hubert Larson
Area 21: Francis D. Hage
Dieter Ballack
22: George J. Licke
Bruce ZumBahlen
23: John S. Rodewald
Henry Hesse
24: Robin Nelson
James Dahlman
25: Gerald Murphy
Daniel Amell
Regional Forester
Reg. Staff Forester
Reg. Staff Forester
Area Forester
Area Staff Forester
Area Forester
Area Staff Forester
Area Forester
Area Staff Forester
Area Forester
Area Staff Forester
Area Forester
Area Staff Forester

REGION 3: James Spangler
Clifford Carlson
Elmer A. Anderson
Area 31: Arthur J. Ward
Kenneth Baumgartner
32: Norman Woollett
Loren Radke
33: Lawrence Gubbe
Carl Prosek
34: John A. Anderson
Raymond Hitchcock
Regional Forester
Reg. Staff Forester
Reg. Staff Forester
Area Forester
Area Staff Forester
Area Forester
Area Staff Forester
Area Forester
Area Staff Forester
Area Forester
Area Staff Forester

REGION 4: Kenneth N. Anderson
Lloyd K. Boe
Area 41: George W. Hammer
Arthur Henrikson
42: Arthur Aamot
43: Nathan Frame
44: John M. Kirkvold
John Halvorson
Regional Forester
Reg. Staff Forester
Area Forester
Area Staff Forester
Area Forester
Area Forester
Area Forester
Area Staff Forester

Grand Rapids Supply Depot:
I. W. Holden
Timothy L. Garvey
L. L. Hink
John H. Larson
Leonard Swenson
Joseph Gorence
Sidney Rommel
E. A. Jamrock
Field Services Supv.
Supply & Inv. Supv.
Equipment Supv.
Building Supv.
Radio Systems Supv.
Forest Roads Supv.
Sr. Land Exch. Appr.
Scaling Specialist

Nurseries:

Archie Hakala, Supt., Badoura
Stanley Karp, Supt., Carlos Avery
Robert Hance, Supt., Gen. C. C. Andrews

change in logging techniques during the following period that additional change was needed by the 1969 Legislature. The 1969 Session made possible the use of consumer scaling which was studied and went into effect about November 1, 1969.

Changes in the laws included the definition of Scaler to allow the designation of qualified, bonded persons, which may include the consumer, to measure cut forest products. Allowed the method of identifying cut products to be specified in the permit. Deleted the requirement that the original bond given by the purchaser of an auction permit and any bond given by any prior assignee shall remain in full force when the permit is assigned to another party. Provides for the passing of title of state timber, for consumer-scaled and other wood, prior to full payment upon making adequate arrangements for collecting payment. Added a new section on consumer scaling of cut products. Other changes were made to provide for consumer scaling. (Laws 1969, Chap. 366)

Sale of Tree Planting Stock to Organized Soil and Water Conservation Districts

Authorizes the sale of nursery stock to Soil and Water Conservation Districts for soil, water, wildlife and conservation purposes or as prescribed in Section 89.31, Subd. 2. Resale of trees by the districts to their cooperators permitted with roots attached. No limitation on the number of trees going on an individual location. (Laws 1969, Chap. 419)

Appropriation for Hiring of Forest Guards

The sum of \$25,000 was appropriated to permit the hiring of forest guards for the Spring of 1969. Sufficient funds were not appropriated during the 1967 Legislature for the hiring of seasonal forest guards. (Laws 1969, Chap. 651)

C. B. Buckman Appointed Deputy Commissioner

On April 7, 1969, C. B. Buckman was appointed Deputy Commissioner by Commissioner Leirfallom, replacing Robert L. Herbst who resigned March 31, 1969, to become the National Executive Director of the Izaak Walton League of America.

Buckman is a professional forester with 23 years of experience in the Conservation Department. He received his B.S. Degree from the University of Minnesota, School of Forestry, in 1940. He was employed as a Public and Industrial Forester for approximately two years before serving in the U. S. Army for four years as a Motor Transport Officer. He joined the Division of Forestry as a ranger in 1946 and served as a ranger, timber appraiser, forest manager, Chief of the State Land Management Section, and as the Director in 1967.

Wm. Aultfather Appointed Director

Again, the Division of Lands and Forestry was without a Director until July 1, 1969, when "Bill" Aultfather was appointed by Commissioner Leirfallom.

The news of Bill's appointment was welcome news as he was no stranger to the Division. Bill had worked briefly as a ranger at Eaglehead. He resigned to take over the family farm which he still

manages and returned in March of 1957 as Forester at Lewiston and then St. Paul in timber sales and forest management. He resigned in November of 1963 to take the position of Regional Forester with the Bureau of Sport Fisheries and Wildlife in Minneapolis.

Bill is past Chapter Chairman of the Society of American Foresters, President-elect of the Minnesota Chapter of The Wildlife Society, past State President of the Izaak Walton League of America, was a member of the Executive Board of the Minnesota Forestry Alumni Association, a member of the Forest History Society, and past Master and member of several Masonic Bodies.

Department of Conservation Name Changed

The name of the Department of Conservation is changed to the *Department of Natural Resources*. The name of the Commissioner of Conservation is changed to the *Commissioner of Natural Resources*.

The Department of Natural Resources will have the following Divisions: A Division of Lands and Forestry; a Division of Waters, Soils and Minerals; a Division of Game and Fish; a Division of Parks and Recreation; and a Division of Enforcement and Field Service.

The Article is in effect on the first Monday in January, 1971. Use of the Department of Conservation may be continued but such use shall not extend beyond the first Monday in January, 1976.

State Forester Positions

<u>Name and Position</u>	<u>Tenure</u>
Gen. C. C. Andrews	
Chief Fire Warden	1895-1905
Forest Commissioner	1905-1910
Secretary, Forestry Board	1911
Dillon P. Tierney	
Assistant State Forester	1911
Wm. T. Cox	
State Forester	1911-1924
Commissioner of Conservation	1931-1933
Grover M. Conzet	
Assistant State Forester	1922-1924
State Forester	1924-1925
Commissioner, Forestry & Fire Prevention.	1925-1931
Director, Division of Forestry	1931-1937
Ellery Foster	
Director, Division of Forestry	1937-1939
Henry G. Weber	
Deputy Director	1937-1939
Acting Director	1939-1940
Director, Division of Forestry	1940-1948
Clarence Prout	
Deputy Director	1946-1948

Director, Division of Forestry	1948-1953
Deputy Commissioner of Conservation . . .	1954-1955
Acting Commissioner of Conservation . . .	1955
Deputy Commissioner of Conservation . . .	1955-1961
Commissioner of Conservation	1961-1963
Director, Division of Forestry	1963-1965

Edward L. Lawson	
Deputy Director	1951-1954
Director, Division of Forestry	1954-1963

Earl J. Adams	
Deputy Director	1956-1965
Acting Director	1965-1967
Deputy Director	1967
Acting Director	1969

C. B. Buckman	
Director, Division of Lands & Forestry. .	1967-1969
Deputy Commissioner of Conservation . . .	1969-

Wm. Aultfather	
Director, Division of Lands & Forestry. .	1969-

Commissioner of Conservation Positions

<u>Name and Position</u>	<u>Tenure</u>
Grover M. Conzet	
Commissioner, Forestry & Fire Prevention .	1925-1931
Wm. T. Cox	
Commissioner of Conservation	1931-1933
E. V. Willard	
Commissioner of Conservation	1933-1938
Herman C. Wenzel	
Commissioner of Conservation	1938-1939
Lew Merrill and Others	
Acting Commissioners	1939
Dr. W. L. Strunk	
Commissioner of Conservation	1940-1943
Chester S. Wilson	
Commissioner of Conservation	1943-1955
Dr. George A. Selke	
Commissioner of Conservation	1955-1960
Clarence Prout	
Commissioner of Conservation	1961-1963
Wayne H. Olson	
Commissioner of Conservation	1963-1967
Jarle Leirfallom	
Commissioner of Conservation	1967-

State Forests Established

Laws 1899, Chap. 214 - Pillsbury

Laws 1905, Chap. 83 - Burntside

Laws 1907, Chap. 90 - Itasca Park & Forest (Made
State Park 1891, Chap. 56)

Laws 1917, Chap. 448 - Minnesota Forests

Laws 1927, Chap. 246 - State Lands Within Minnesota
National Forest (Later named the Chippewa)

Laws 1931, Chap. 124 - State Forests (Not named;
legal descriptions only, which are in the
following state forests):

Badoura	Koochiching
Beltrami Island	Pillsbury
Cloquet Valley	Pine Island
Fond du Lac	St. Croix
Foot Hills	Savanna
George Washington	Sturgeon River
Kabetogama	White Earth

Laws 1933, Chap. 419 -	
Becker & Mahnomen	Kabetogama (in original
Counties	Minnesota)
Beltrami Island	Land O'Lakes
Cloquet Valley	Pine Island
Finland	Savanna
Fond du Lac	Third River
Foot Hills	White Earth
Grand Portage (in original Minnesota)	

Laws 1935, Chap. 372 -	
Bay Lake	Paul Bunyan
Buena Vista	Pillsbury
Crow Wing	Rum River
Blackduck	Smoky Hills
Mille Lacs	Waskish
Mississippi Headwaters	And additions to Foot
Nemadji	Hills, Land O'Lakes,
Northwest Angle	White Earth

Laws 1939, Chap. 343 - Koochiching, Lake, and St.
Louis Counties, 12,000 acres.

Laws 1943, Chap. 171 -	
Beltrami Island	Mille Lacs
Blackduck	Mississippi Headwaters
Buena Vista	Nemadji
Cloquet Valley	Northwest Angle
Crow Wing	Paul Bunyan
D. A. R. Memorial	Pillsbury
Finland	Pine Island
Fond du Lac	Rum River
Foot Hills	Sand Dunes
Gen. C. C. Andrews	Savanna
George Washington	Smoky Hills
Grand Portage	St. Croix
Kabetogama	Third River
Koochiching	White Earth
Land O'Lakes	

Land owned by the State is included in the fol-
lowing state forests: Bowstring, Burntside, Min-
nesota.

Laws 1953, Chap. 292 - Chengwatana

Laws 1955, Chap. 183 - White Pine

Laws 1961, Chap. 330 - Golden Anniversary
Chap. 521 - Minnesota Memorial Hardwood

Laws 1963, Chap. 332 - Established and Re-established:

Badoura	Lake Jeanette
Battleground	Land O'Lakes
Bear Island	Lyons
Beltrami Island	Minn. Memorial Hardwood
Big Fork	Mississippi Headwaters
Birch Lakes	Nemadji
Blackduck	Northwest Angle
Bowstring	Pat Bayle
Buena Vista	Paul Bunyan
Burntside	Pillsbury
Chengwatana	Pine Island
Cloquet Valley	Red Lake
Crow Wing	Remer
D. A. R. Memorial	Rum River
Emily	St. Croix
Finland	Sand Dunes
Fond du Lac	Savanna
Gen. C. C. Andrews	Smokey Bear
George Washington	Smoky Hills
Foot Hills	Solana
Golden Anniversary	Sturgeon River
Grand Portage	Two Inlets
Hill River	Wealthwood
Huntersville	Welsh Lake
Insula Lake	White Earth
Kabetogama	Whiteface River
Koochiching	Administrative & Scattered
Lake Isabella	

Laws 1967, Chap. 514 - Boundary changes in following:

Badoura	Koochiching
Bowstring	Land O'Lakes
Buena Vista	Minn. Memorial Hardwood
Chengwatana	Mississippi Headwaters
Crow Wing	Pillsbury
Fond du Lac	Smoky Hills
Gen. C. C. Andrews	Foot Hills
George Washington	Administrative & Scattered
Golden Anniversary	
Huntersville	

Laws 1969, Chap. 257 - Snake River
Boundary change in following:

Chengwatana	Smoky Hills
Cloquet Valley	Sturgeon River
Nemadji	Two Inlets
Mississippi Headwaters	Administrative & Scattered



*A Later Forest Service
Badge*

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