

**BE A FOREST
RANGER
1927-1936**

**By
Don Wilson**

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**who was a part
of my nearly 45 years
in Minnesota forestry**

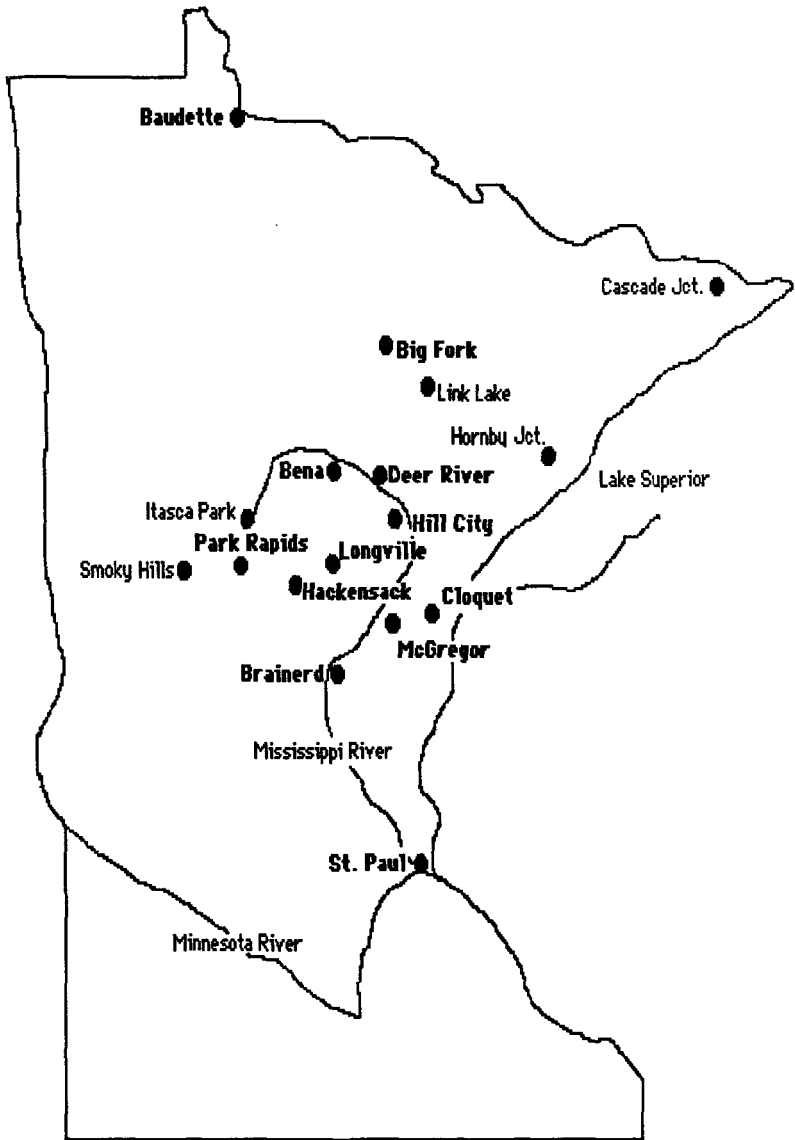
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CONTENTS

Be A Forest Ranger.....	1
The First Day.....	6
Smoky Hills.....	14
The Telephone Line.....	21
Thorpe.....	26
Slash Inspection.....	33
Bena Reconnaissance.....	42
Wolf Lake Telephone.....	52
Longville.....	57
Big Fork Reconnaissance.....	65
Lookout Towers.....	75
The Bridge.....	85
Rainbow Inn.....	91
Timber Marking.....	96
Hackensack.....	106
Land Economic Survey.....	113
Baudette.....	118
Big Game Patrol.....	128
Forest Service Paper Work.....	135
The Log Office.....	142
The Cottonwood Lake Fire.....	149
Timber Trespass.....	155
Township 60, Range 24.....	161
The Ice House.....	167
Deer River Fires.....	174
Starting Fires For Pay.....	181
Oscar.....	187
The Cedar Poles.....	192
The Costly Fire.....	195
The Holy Water Fire.....	201
Township Fire Wardens.....	206

Minnesota



Preface

The experiences related in this book occurred during the first ten years of my nearly forty-five year career in Minnesota forestry. As I look back, they now seem to have been the most important.

All of those ten years were of a period of reduced economic times and most were a part of the Great Depression. The Minnesota political spoils system was very active during that time since it was immediately prior to the enactment of the State Civil Service System. It seemed then as if someone was always looking at your job with envy and even threatening to take it.

It was often said then that to work in the Minnesota Forest Service one needed only a strong back and a weak mind. I see those people now as a group of employees with great loyalty, complete dedication and a real commitment to hard work. There was no such word as overtime, and it was generally accepted that as long as there was a job to be done, there was an obligation and a duty to complete it. Little, if any, thought was given to the hour of the day or the day of the week.

Those years, as well as those prior to them, were certainly the formative years for Minnesota forestry. A foundation was being laid then for the future of forestry in Minnesota.

Because those were years of extremely low appropriations, few new employees of the Minnesota Forest Service were fortunate to work year long. The greater number worked seasonally for several years before the opportunity arose for them to work all year. Their enthusiasm was just as great as those who had full time employment. Minnesota can be proud of their dedication.

D.W.
1985



Don Wilson

Introduction

It took the great Hinckley forest fire of September 1, 1894, with 418 deaths and a huge loss of property to arouse the public to support heroic efforts by General C.C. Andrews. This followed a period when Minnesota forests were cut and burned with complete disregard for the future. Russel N. Cummingham commented in 1933, "The forest problem in Minnesota is not so much one of saving the remaining timber supply, because there is too little left to save. The problem is to rebuild the forests which have been swept away by logging and fires."

From its inception in 1911, after more disastrous fires in 1910, through the days of the Great Depression of the 1930's, the Minnesota Forest Service had the almost overwhelming task of rebuilding public forest land as well as encouraging improved forest management on privately owned forest properties.

Although seriously understaffed and under financed, the limited field staff was composed of rugged, dedicated and highly motivated men that constantly preached reforestation and protection. They are credited with steady accomplishments during the early difficult years. Through it all, they learned the hard way that solutions to many forestry problems evolve only slowly, a lesson that must be remembered.

State forestry employees developed a feeling of pride when projects such as bridge building, cabin building, fire tower construction and roads were completed with a minimum of materials and at low cost. A strong "esprit de corps" resulted that is still widely respected.

Many milestones have passed since the old Minnesota Forest Service became a part of a newly established Department of Conservation and was renamed the Division of Forestry. Forest management and protection accomplishments to date have been notable but required more than 75 years of sacrifice and

dedication on the part of a few. Further progress will require extra effort to overcome the still present lack of public concern.

In writing about his personal experiences between the years 1927 and 1936, Don Wilson has challenged readers to carry on in the traditions established by pioneer Minnesota Forest Service employees and public spirited citizens.

Don Wilson was born in Pottawattamie County, Iowa. He attended grade school in Straight River Township, Hubbard County, Minnesota. He graduated from the Park Rapids High School after working on the family farm and in lath mills near Park Rapids.

On April 18th, 1927, Don first obtained employment with the Minnesota Forest Service as a towerman in the Osage district of the Park Rapids area. There were many unemployed at this time and Don considered himself fortunate to receive \$80.00 per month salary. After one year he was promoted to the position of forest patrolman at Longville and the following year was appointed to the position of patrolman-at-large with headquarters in Deer River. After serving in the field in a number of assignments of increasing responsibility, he was, in 1956, selected to fill the position of assistant chief in charge of fire protection with headquarters in St. Paul. By 1968, he was serving as supervisor of the forest protection and public relations section with distinction. During his entire career he earned a great deal of respect from all fellow workers but especially those working in the field. Many World War II veterans who joined the division in 1946 remember Don for his helpfulness.

I think that you will find these personal anecdotes very interesting and of historical value because of their accuracy. I doubt that they will represent Don Wilson's last contribution to forestry in Minnesota.

Clarence B. Buckman
Deputy Commissioner
Minnesota Department of Natural Resources
Retired



Be A Forest Ranger

"Be a forest ranger. Hunt, fish and trap. Cabin furnished. Vacation with pay."

That was an advertisement which appeared in the so-called "slick" magazines in the early 1920's. I was so taken with the advertisement that I often wondered why I did not answer it. Much later I learned it was only a promotion for a correspondence course with no probability of a job at the conclusion. But it always sounded so good each time I read it.

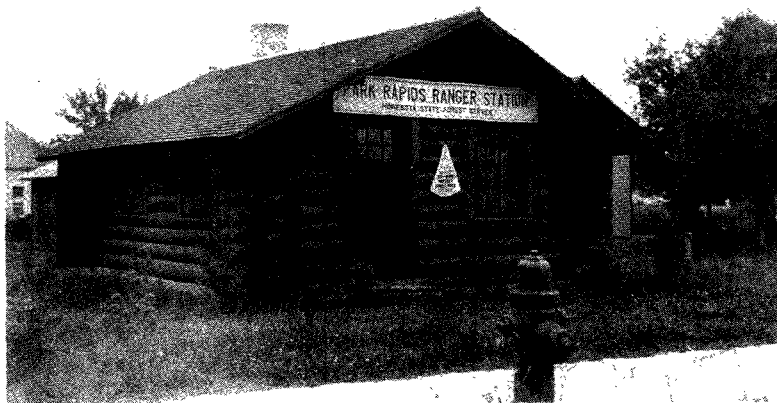
I had grown up on a Minnesota farm and just completed high school. One of my father's favorite expressions was, "There must be an easier way to make a living." He usually said this as we sat down for a brief rest from haying, harvesting or the distasteful job of loading barnyard manure by hand. I was not afraid of hard work but had made the decision that I did not wish to be a farmer.

I had tried the Dakota harvest fields but that was just more farming. One summer of working with a road construction

crew, where horses were used to power the earth moving equipment, did not exactly appeal to me either.

After that I had a job carrying slabs in a sawmill which led to bundling lath and later to the position of lath grader. At least it seemed to me to be a position since there was only one other, the mill-wright, who was paid a higher wage. But saw-milling ended for me the day I saw two serious injuries. In the morning a man lost two fingers when they were cut off by a saw. In the afternoon another worker lay unconscious after a pine knot came off a saw and hit him in the forehead. The dent the pine knot made was far from pleasant to look at. My work was at a group of saws where either of these accidents could easily have happened to me. I quit work in the mill at the close of that day.

Following those tries at different jobs, the "Be a forest ranger" advertisement kept coming back to my mind. Like many others I assumed that forest rangers only climbed lookout towers and put out forest fires. I decided to go to the Park Rapids ranger station and inquire about how to become a forest ranger.



The 1927 Ranger station.

Allen (Pop) Stone, the patrolman-at-large, was all alone the day I went there. Stone was very patient with me. He not only enlightened me about the Minnesota Forest Service and its work but also answered my many questions. He explained how entrance employment at any level was determined by the results of a written examination. This examination was given early in March each year at every ranger station. He told me that in all probability there would be only one vacancy in the Park Rapids district the following spring. The vacancy would be for a lookout towerman and would be seasonal. Stone further informed me that employees on these seasonal jobs sometimes would work for three or four summers before they attained year long employment. I should not expect anything different. Before I left he encouraged me to consider taking the examination. Even though a great deal of his information was not of positive nature, I left with a good feeling.

For part of the coming winter I would have a job looking after the livestock for Ed and Anna Ripley, a farm couple who would be away. Anna had been a school teacher and when she learned I intended to take a forestry examination, she had many suggestions. She outlined what she thought I should study in preparation for such an examination. I would be living alone in their home and would have lots of time to study during the time they would be gone. The next time I saw Anna Ripley after that winter was in 1969 on a street in Park Rapids. She was then well in her 90's but her memory was better than mine. She told me of specific study recommendations she had made and which I had forgotten.

On March 1, 1927, I was at the Park Rapids ranger station at an early hour and anxious to take the test which could determine employment with the Minnesota Forest Service. I scanned the questions looking for some for which I had prepared, but found none. There was not a question related to trees. Nearly all the questions were farm or rural life oriented. Being fresh off the farm I should do well.

One of the questions asked was "How many bushels of oats are required to properly seed an acre of prepared farm land?" Another was "Outline the steps required to harness and hitch a team of horses to a wagon." A few years later when I was conducting the same type of examination, this same question appeared. One applicant, whose knowledge of the farm was apparently limited, wrote, "It all depends upon how far the wagon is from the barn."

Later I learned that the Minnesota forest Service was the only agency of the state which gave a written examination as a requirement for entrance employment. The practice was begun by Wm. T. Cox, the first State Forester, and continued by his successor, Grover M. Conzet. Both felt that the only fair way to select new employees was through a written test. They apparently also felt that those with a rural background would become better Forest Service employees. It was more than ten years after my entering forestry that the Minnesota Civil Service System was initiated.

About the middle of March I was informed that I had passed the examination. There would be an opening for a lookout towerman at the Smoky Hills station. The job would be only for the summer months but could possibly continue through October. The duration would be totally dependent upon the availability of funds. The wages were \$80.00 a month. Would I be interested? I assured them that I would.

I was notified to come to work as soon as the winter's snow had melted. I watch the snow slowly disappear from the fields on the farm. Each day I felt that I could expect to receive a telephone call. Several more bright and sunny spring days passed and still no call came. Maybe they had forgotten me? I became impatient and went to the ranger station. There I learned that the Forest Service definition of when the snow had melted was different than I had thought. They meant when the snow had melted in the woods and there was a danger of forest fires. I

returned to farm to wait some more, grateful that I had not been forgotten.

The long awaited telephone call came on a Friday. I was to report to the Park Rapids ranger station on April 18th. I was to be there a 8 o'clock and to bring groceries to take care of my needs for a week. Someone would take me to the Smoky Hills station. Of course it was only a lookout tower job for the summer, but I visualized it as the first step on my way to becoming a forest ranger. It seemed to be a long weekend, but I felt mighty important in anticipation of the coming Monday.



The First Day

Long before 8 o'clock, I arrived at the Park Rapids ranger station. I was not trying to impress anyone; I was just anxious to go to work. Thankfully that feeling was to stay with me for the next forty-four plus, years.

Harold Page, the district ranger, took me to the Smoky Hills station. Page was not an outgoing person and there was little conversation on the way. It was very apparent that he did not wish to talk and I was probably too scared to try to start a conversation.

I had grown up on the lower end of the Shell Prairie and was only acquainted with comparatively flat land. As we came closer to the Smoky Hills, I was struck by their height. Soon I could see the lookout tower. I had never climbed a tower. Would I be able to do it? I thought of the many times I had climbed a ladder to the peak of the hayloft of the barn on the farm. It was nearly thirty feet from the hayloft floor to the peak. Once at the peak, I would ride the hayfork over to the cupola. I remembered how much of a problem I always had getting back down the ladder.

Maybe it would be that way at the tower - if I were able to climb the eighty feet to the top. These thoughts added to my nervousness.

Before we arrived at the Smoky Hills station, Page stopped at a farmhouse near the base of the tower hill and filled an eight gallon cream can with water. He informed me that this would need to last me for awhile.

At the Smoky Hills cabin, Page gave me a large brass key. It must have weighed at least four ounces. He said it would unlock the padlock on the cabin as well as the one on the lookout tower and went on to impress me with its value. It would unlock locks at many Forest Service locations, which made it still more valuable. He told me that if I lost the key there would be a \$5.00 charge. That really impressed me. Five dollars represented nearly two days' pay.

We unloaded my groceries and the can of water before Page lifted out a packsack. In it was a telephone (crank type) and three telephone batteries. He asked me if I had ever installed a telephone. We had the same type of a telephone on the farm where I had changed batteries, but that was all I knew about telephones. Between the two of us we got the packsack, which must have weighed fifty pounds, on my back. Page then said that he would tell me what to do after I reached the top of the tower. I began climbing the ladder with a bit of reluctance. I learned later the reason I made that climb alone was that Page never would climb a lookout tower.

The ladder on this lookout tower had a netting of farm hog wire around it for safety purposes. When it was installed there apparently was no thought given to someone climbing the ladder with a filled packsack on his back. There was just room to squeeze through and many times the packsack caught on the wire netting. When this happened, I would need to back down a step to get it unhooked, then try to squeeze closer to the ladder to keep the packsack from catching. However it would eventually



Smoky Hills style tower.

catch again and each of these incidents would cause me to clutch the steel ladder still tighter.

It was a struggle but I made it to the floor of the cab or, as it was referred to in those days, the crows-nest. Now I had to get the key out of my pocket with one hand, unlock the padlock without dropping that valuable key, and still balance the packsack while I held onto the top of the ladder with the other hand. I would not be surprised if my finger prints are still showing on that piece of galvanized iron ladder. The next struggle was to get myself and the packsack through the small trap door. Eventually I made it and opened a window. Page yelled up instructions in stages until the telephone wires were all accounted for and connected. One long ring was the universal

ring to alert telephone operators. The ring went through. I got an answer showing that all the wires were connected properly.

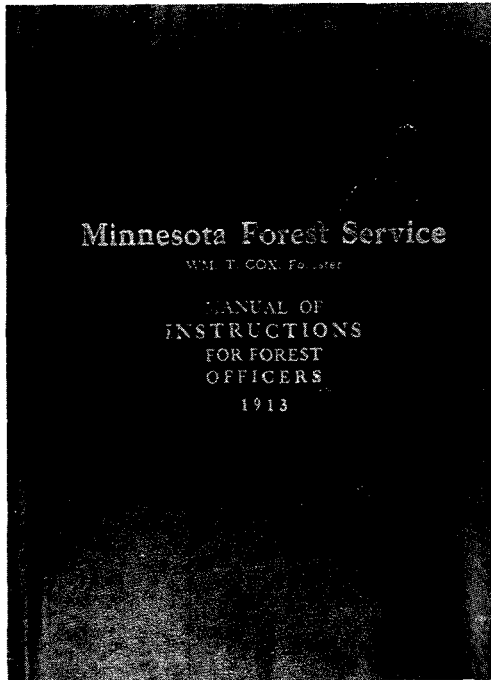
With a, "Report all smokes you see to the ranger station at Park Rapids," Page drove away. I could find no instructions as to how to maintain the lookout tower records. Now I was all alone and it was my first opportunity to pull myself together. First I found a string and tied my key firmly to the belt loop of my trousers. Then I located the previous year's tower records so I could determine what I was expected to do. But this still did not fully prepare me for reporting the first smoke that appeared.

Some time after noon I saw the first evidence of a fire. There was no wind and the faint smoke seemed to be going straight up. I waited to decide if the smoke might be two or twenty miles from the tower. As I watched, it became grayish in color and then black. Eventually I decided it was probably twenty miles away and could be a burning building because of its very dark color.

I reported the smoke in less than two minutes after I first saw it and tried to sound professional. When asked how far it was from the tower, I hesitated a few seconds even though I had already decided it was between fifteen and twenty miles away. I thought the hesitation might indicate that I was carefully considering the answer.

After a half hour I became convinced that it was not a burning building. There was more smoke and it was quite widely spread at the base. I called Park Rapids to report my observation and was told that fire fighters had been dispatched and the location of the fire was known. Days later I learned my estimate of distance had been wrong by some five miles. In less than an hour the volume of smoke had diminished showing that the fire, the only smoke I saw that day, had been brought under control.

It was after five o'clock when someone called me from Park Rapids. Since no smoke was visible I was told I could leave the tower for the day. I was really grateful for this since I had not



The 1913 Manual

had a thing to eat since breakfast. Page had said nothing about going down for lunch so I stayed right there. After that I took a sandwich and fruit jar of water with me.

Back down at the cabin I first made myself a sandwich and brewed some coffee. As I ate the sandwich I had my first real look at the inside of the cabin. It had not been occupied since the previous fall. Dana Worrall had helped build it and had been the only one to live in it. Dana began work the year before and was now the forest patrolman in the Park Rapids district. There was plenty of dust and dirt just from having been left vacant. My first thought was to scrub the floor. Then I looked at the eight gallon cream can of water. I had been told to bring groceries for a

week. Maybe that can of water would need to last a week. I decided to just sweep the floor.

There were three rooms in the 16' x 24' cabin; a kitchen, a bedroom, and a so-called living area. The living area was also the place where the fire fighting tools were stored. The partitions between the rooms were boarded up with shiplap, surfaced boards with overlapping edges, but these boards went only up to the height of the eaves. The rooms had no ceilings. There were door openings between the rooms but no doors. The outside walls were exposed 2 x 4's.

The furnishings were rather meager. In the living area stood two kitchen chairs, a table, a wood burning heating stove (New Maple Brand) and a woodbox. The sloping woodbox lid opened to reveal stenciled lettering which read, "Keep this lid closed." A kerosene lantern hung from a wire in the middle of the room. In the bedroom was a double width, double deck steel bunk with springs and mattresses, a couple of pillows and some blankets. There was nothing else except the nails that had been driven into the walls for clothes hangers. A strange and definitely musty smell was in the air. I could not decide if the odor was from the mattresses and blankets or due to the fact that the place had been closed for so long. I opened all the windows wide.

In the kitchen was a wood burning cook stove. It was really small and later I learned it was often referred to as a watch-fob size stove. There was a tiny table and two more kitchen chairs. A couple of wooden orange crates were nailed to the wall for cupboards.

One look at the dishes convinced me that I would need to sacrifice some of my precious water from the eight gallon cream can. But there were not that many dishes and washing them was not going to take that much water. The tea kettle and the coffee pot were gray enamel. The coffee pot, wider at the bottom than at the top, was strictly for boiling coffee. A four quart blue enameled kettle had evidently been dropped a few times for it had some sizable spots chipped off both on the inside and

outside. I also found a large galvanized dish pan, much too large for the orange crate cupboard and undoubtedly intended for some kind of camp use, and a large bread pan - the kind in which three loaves of bread might be baked at one time. One large frying pan, made of thin steel, was bowed up in the middle from too much heat and very much rusted. It took me a half hour to clean the frying pan so I could use it. Everything else was tin ware. The plates were old, well used and somewhat bent. The one quart dish-ups, a substitute for serving bowls, the six tin cups as well as the tableware, showed many rust spots. This was my first experience in eating from tinware.

The cups were a lesson in themselves. They had tin handles that were fastened only at the top rim of the cup and if the cup was filled, the handle would bend. When filled with hot coffee, all the heat of the coffee was immediately transferred to the handle and cup. If I could have hung onto the handle, the hot tin cup would have burned my lips. Since the coffee cooled faster than the tin cup, I soon learned to drink cold coffee.

I spent an hour washing dishes and scouring off the rust spots. I fried myself a pork chop and heated up a can of beans. Then I had to wash dishes again. I found rust spots on the tin dishes I had washed only an hour before and had not yet been used. I washed them again. Apparently I was not getting them dry enough. The wood burning stove was still warm so I put the tin dishes upside down on the stove top. I also put the tableware on the warm stove top. Now they were really dry and the rust spotting problem was solved. I had finished the dishes in the meager light of a kerosene lantern.

I still had to make my bed. In with the blankets I found a double length cotton sheet blanket which was meant to be folded over to make both the top and bottom sheet. The other blankets were double length camp style, all cotton and not an ounce of anything else. When the weather was cold one would need to be strong just to hold up enough of them to keep warm. Later I

learned that most everyone referred to them as wooden blankets because they were so stiff and provided so little warmth.

It had now become very dark. For several reasons I went to bed without even looking at the time. There was no reading material there and I had brought none with me. In any case the meager light given off by the kerosene lantern made for poor reading. It had been a long and exciting day and probably because I had been excited about the new job, I had slept little the night before. Since it was still rather warm, I left the bedroom window open.

I was not to be in bed long. I had been to sleep but suddenly found myself standing up. A howl of some sort had taken me completely out of bed. It took a few seconds to realize where I was and what the noise had been. On the farm I had heard the coyotes howl many times but they generally were across the fields and at least a half mile away. This sound came from under the bedroom window but I knew what it was. There was not any question but that it had been a coyote. But the sounds had stopped. In my sudden exit from the bed I suppose I made some noise and scared the coyote away. Without bothering to close the window I went back to bed and there were no more disturbances that night.



Smoky Hills

During the next five weeks the coyotes and I became better acquainted. At least I came to know more about coyotes and their habits. When they didn't show up, I missed them. The evenings they did come they were company for me. My direct contact with humans was very infrequent so I looked forward to the arrival of the coyotes.

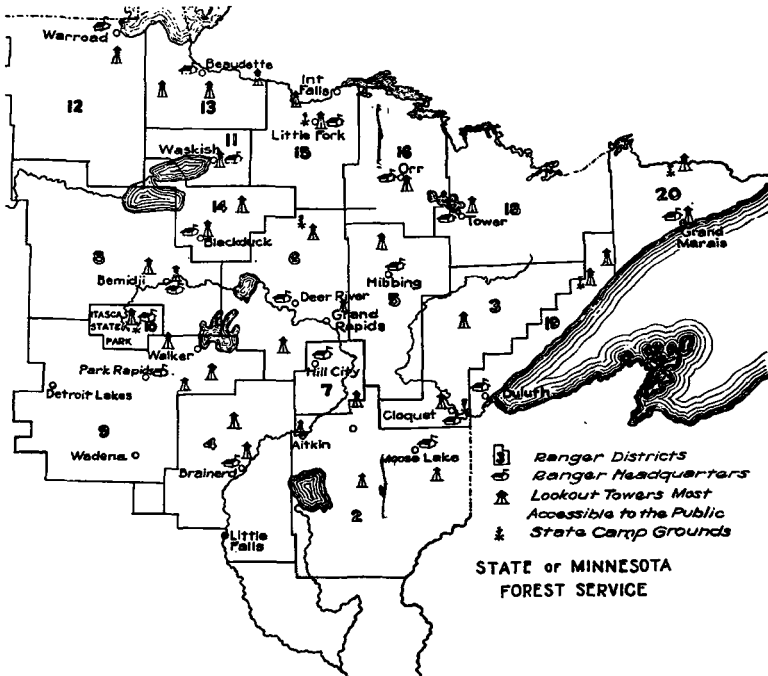
After that first night I had my first opportunity to explore the cabin grounds at Smoky. At an outside back corner of the cabin I discovered a large covered galvanized tank. Even though the pipes had been disconnected and the tank drained, it was definitely a possible source of water that Page had failed to mention. I located a homemade ladder and in a short time had a pipe connected to the eave trough of the cabin roof. When it rained I would have plenty of water. I would be able to scrub the cabin floor, wash dishes when I wanted to and could even take a "bucket bath." Still I realized that the water I would need for drinking and cooking would have to come from an eight gallon cream can.

Before my exploring was completed and it was time to climb the lookout tower again, Fred Meinke arrived. Fred had been a year ahead of me in the small high school we attended so we were acquainted. Fritz (as he was always called in school) had brought me another eight gallon cream can filled with water and now I was well supplied.

Fritz had begun work with the Forest Service the year before and had been assigned as the forest patrolman for the Smoky Hills district but continued to live in Park Rapids. He had come to instruct me in the duties of a lookout towerman. I had made some assumptions the day before but had not gone far enough with my thinking. Fritz cleared up the record keeping part of the job for me. The day before I had seen a farm silo in one direction and a shining tin barn roof in another direction. I was certain the barn was farther away but had not been able to determine how far either was from the lookout tower. Before Fritz completed his instructions, he showed me exactly where they were on a map so I could use them as a guide in estimating distances to any smoke that might appear.

Before leaving, Fritz gave me a short course in how to determine probable fire weather. This was a primary guide to use in determining fire occurrence possibilities and would help me decide when I should be in the lookout tower. There was no telephone in the cabin so if I was unable to determine fire occurrence possibilities, I would need to climb the tower and telephone the Park Rapids ranger station. Since I had no desire to climb the tower except for fire lookout duty, I paid strict attention to his instructions. Fortunately the next time Fritz came he brought a telephone for me to install in the cabin.

Another bit of instruction I received was what I should work at when there was no fire weather. The road, which wound around the side of the hill, was quite narrow in some places and needed to be widened. As well as building the cabin, Dana Worrall had built most of this tower road the previous year. To improve the road, and especially to make it wider, necessitated



The 1927 Ranger Districts

moving the soil from the bank side to the outer edge. Dana had done the work almost entirely with a #2 shovel and I was to use the same tool.

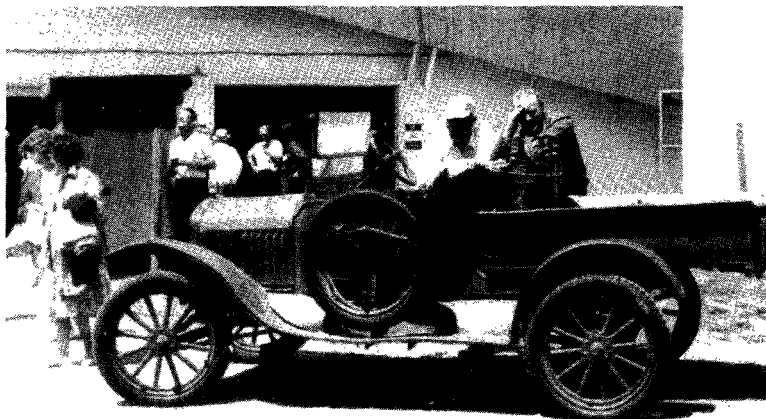
There was considerable rain that spring and I am certain I spent more hours working on the road than I spent in the lookout tower. During the many days of light rain, I worked on the road and got wet rather than sit alone in the cabin. I have no idea how many yards of earth I moved or how many rocks I dug out, but there were lots of both.

Nearly every week Fritz would call by telephone and say he was coming my way. Did I need groceries? I nearly always needed something. I had a charge account at a Park Rapids grocery (as did almost everyone) so he would bring what I needed. He always brought another cream can filled with water

and usually stayed just long enough to have a cup of coffee with me. It was only over those cups of coffee that I learned what was going on in the outside world.

On one of these visits he was not driving his own car but a Model T Ford. This Model T was the first vehicle owned by the Minnesota Forest Service. A 1919 model purchased in 1923 from a used car dealer, it was, as were all Model T's, black in color. It had been a roadster but had been converted into a pickup by adding a small box. The top had long been gone and never was replaced. It had been dubbed the "puddle-jumper", a name which stayed with it. Now considered a relic, it is still owned by the Division of Forestry but is in the custody of the Minnesota Historical Society.

Fritz was on his way to a point near Detroit Lakes to check on a timber cutting operation. Since fire conditions were considered safe, he had been told to take me along. Those were welcome words as I had not been off that hill for nearly a month. What he was to check had been incorrectly presented and was disposed of in a few minutes. Fritz, my superior, decided that since we had the time and neither of us had been there, we



The "Puddle Jumper."

should go to Fargo, N.D., just across the state line, to eat lunch. I suppose we both might have been severely reprimanded if it had been known we had driven those extra miles. Even though I was entitled to reimbursement for the meal, Fritz thought neither of us should ask for it since it was eaten out of state. I was not at all concerned and was happy to eat a meal I had not prepared myself.

The coyotes were my real company during those weeks. Every other night or so they would be under the bedroom window. I concluded there might be two or three of them, but at times it sounded as if there might be a dozen or more. They would arrive shortly after dark when I usually was in bed and asleep. Some nights I would be reading and possibly the light kept them away. On other nights, with the light out, I stayed awake waiting for them. When they didn't come I really missed them. Even when I was waiting for them and listening intently, I never heard them coming. It was only when they howled that I knew they were there. I became so accustomed to them, whether awake or asleep, that their first howls no longer startled me as they had that first night.

On those nights when I waited for them I would lie awake thinking about them. Had the place always been a howling place for their ancestors? Had the building of the lookout tower and cabin during the previous year kept them away? If so, during the past winter when the cabin had not been occupied, had they again established this as their howling hill? There were nights when I was exceptionally tired and already asleep, but still they awakened me. Sometimes I went back to sleep while they were still howling. Their howling had actually become music to my ears.

With a limited amount of tower duty and a lot of road work, the spring season soon passed. It was approaching Memorial Day, the time I had been told might be the conclusion of the spring fire season in that part of Minnesota. The road work was

nearly completed so I began to wonder what the future held for me.

During the last week of May, a telephone call informed me that someone would come for me the following morning. I was told I would be going to Park Rapids to assist on a telephone line construction project. I had already visualized that any day I would be leaving Smoky Hills and a plan had formed in my mind. It concerned the coyotes and my leaving.

The coyotes had done their howling in an area immediately to the west of the cabin which was wooded with small jack pine trees, four to six inches in diameter. Some fifty feet from the cabin and just beyond the jack pine trees was a large Norway pine tree in a small cleared area. I had selected this as the place where I would carry out my plan to meet them in the dark.

As darkness came that last evening, the weather was ideal. It was a night with not the slightest movement of air. The nearly full moon was high in a cloudless sky. I could see clearly under the branches of the jack pine trees. I made myself as comfortable as possible by the large Norway pine tree and waited.

The coyotes were right on time. About an hour after I normally would have turned out the light I heard them coming. It was so quiet I could hear their paws on the pine needles which littered the hillside as well as the hilltop. I first saw the two of them as they moved in the shadows to a point under the jack pine trees and near the bedroom window. They were there only seconds when one raised his nose skyward and let out a mournful howl.

I had thought I would be ready for whatever might take place. When I was inside the cabin, I was no longer surprised when they howled. I had really thought when I saw one actually howl, I would not be startled. How wrong I was. I had watched the preliminaries, saw the nose raised to the sky, so I knew what was going to take place. What I didn't know was that there would be those chills - those chills that ran up and down my back. I was certain I could feel every hair of my head standing

on end but I was not afraid. I was certainly not as well prepared for this experience as I had thought.

There was more howling - but just for a few minutes. Then suddenly the coyotes were gone. They left as quietly but more rapidly than they had arrived. I felt I had not moved a muscle but maybe I had. Since I was hardly forty feet from them, maybe the coyotes had caught my scent in the very still air. In a few more seconds all was silent once more except I could now hear my own breathing.

Many times after that evening I wondered if what I had done might possibly have caused them to leave forever. I reasoned that it probably had not since they had returned after my quickly getting out of bed that first night. Fifty years later, the cabin is no longer there and the lookout tower is in use only intermittently. It is my hope that the descendants of those coyotes are still going back to Smoky Hills - to their howling hill.



Itasca Park Telephone Line

When Dana Worrall arrived at Smoky Hills that late May morning, I was all packed and ready to go to Park Rapids. With my move I would now be able to eat in a restaurant even though it would be at my own expense. In those few past weeks I had had enough of my own cooking and of eating alone.

When we arrived in Park Rapids, I was told by Allen Stone that my headquarters would now be there but as at Smoky, I was told that I would be reimbursed for any authorized meal expenses when I was away from headquarters. The limit was \$1.05 a day or 35 cents a meal.

A small bunkroom had been fixed up in one corner of the warehouse. This was where I would sleep. Water had not yet been piped into the ranger station but was available from a community tap down the street. This was not too much different than at Smoky Hills but at least for the time being I had gotten away from the eight gallon cream can.

Just to the west of the nearly new log ranger station and adjacent to some Great Northern railroad tracks was a large pile

of telephone poles. I was told that these poles were the reason why I was now at Park Rapids. They were to be a part of a replacement telephone line I was to help build.

The Minnesota Forest Service telephone lines of that period were limited in mileage and of quite simple construction. Most of these lines were of single wire construction. This was known as a grounded system. Also many miles of wire were hung from trees with the use of split-tree insulators.

The line to be replaced was one of the better lines. While it was only a single wire system, it was on poles for the entire twenty miles between Park Rapids and the Itasca State Park headquarters. However the poles were small, old and partially rotted. The entire system was no longer reliable and was to be rebuilt as a two-wire or metallicized system.

At that time Itasca State Park was under the jurisdiction of the State Forester since a separate identity for state parks was yet to be established. Increased tourist activity at Itasca demanded that there be an improvement in this telephone line since it was the only way to connect to the Bell System.

The replacement telephone line was to be completed with new poles, wire, brackets and insulators. There would be a few places where the route would also be new. Planned highway straightening changes at a number of corners meant relocation of some parts of the line. Generally Forest Service telephone lines followed highways and were on the highway right-of-way. Since the new highway changes were not yet cleared, it meant that we would need to remove the trees and brush where the line was to be. This would be done with axes, old fashioned cross-cut saws and brush hooks.

Dana, Fritz, and I were assigned full time to this project. Stone would come out once a week or so to make certain we were doing things correctly. With the exception of a very few days' assistance from others, the three of us did all the work of rebuilding of this line.

Before the actual telephone line construction could be started, each of the approximately 650 telephone poles had to be "roofed". This was accomplished by putting a peak on the top end of each pole with a sharp axe. The axe had to be very sharp and the axe swing accurate. By the time each of us had mastered this phase of the work, the job was completed. Putting the roof on with a saw did not accomplish the desired results. Sawing left a rough surface where moisture could collect and hasten the rotting of the pole. The smooth surface remaining after the axe cut eliminated any chance of moisture collecting and greatly reduced the probability of rotting. The treating of poles by using any type of preservative had not yet become common practice.

The State Forester was sometimes obligated to provide a job for some politician's relative. Several days before I had arrived at Park Rapids, such an appointee had been put to work on the pile of telephone poles. Like many other such appointees he had been looking for an easy job for the summer. After Dana told him what was to be done with pile of poles, and that he would be a part of project, he decided it wasn't for him. The following morning the politician's son told Ranger Page, "I feel a sick spell coming on and believe I should go home to be sick". He never came back. So the poles were still there for the three of us to roof before we could begin construction of the line. A truck and crew were hired to distribute the poles along the highway. The proposed line had not been staked for the individual pole locations so the poles were scattered thirty-two poles to the mile. This meant there were only a few lying anywhere near the place they were to be set. Longer poles, 25 to 30 feet in length, were for use at road and driveway crossings. Many of these were not in the proper place. The greatest number were the 20 foot poles which could be carried by two men. We used the Model T to skid the longer poles to where they were to be used. This was done with a light logging chain, one end fastened to the rather flimsy frame of the puddle-jumper.

The really hard work, digging the pole holes, was done entirely by hand. Digging a hole in sandy soil for a 20 foot pole was not much of a problem. Digging a hole, especially for a 30 foot pole, in clay soil was. Maneuvering a telephone hole spoon in the the bottom of three foot hole to get the last dregs of loose soil was a tough assignment.

As everyone knows, telephone poles stand on end. Putting a 20 foot cedar pole in a prepared hole can easily be accomplished by two men. To upend a 30 foot pole and get the big end, which is usually bulged, into a hole was all three of us could do. Usually it was not accomplished on the first try but we always managed to push in three or four inches of loose soil. This meant laying the pole down and again laboriously spooning out the hole in preparation for another try.

When we had one half mile of poles set in the ground with brackets and insulators attached, we would lay out the two wires. The wire (#12 galvanized) came from the factory in approximately one half mile rolls. A borrowed reel and frame just fit into the Model T box. It had wheelbarrow -like handles at both ends. With a roll of wire on the reel, one wire end would be tied to the base of the pole. With a great deal of care the wire would reel off as the puddle-jumper was slowly driven down the road. When there was a tree or any other obstruction between the road and the new pole line, two of us would carry the reel of wire around the obstruction and back to the Model T. When the first wire was laid at the base of the pole line, the procedure was repeated for the second wire.

With a forked pole the wires were lifted and put behind the brackets, ready for tightening. The Model T was used to pull out most of the slack before the wire pullers (called come-alongs) were used. Each wire needed to be tightened with the right amount of sag between the poles. Wire too tight would contract with cold winter temperatures and break. A transposition of the wires was made every tenth pole. This transposition was very necessary at regular intervals to assure a quiet and usable

telephone line. When the wires were tied to the insulators we would move ahead and work on the next half mile.

Both Dana and Fritz were forest patrolmen with districts, but apparently their other Forest Service work was put aside as we worked on this project six days a week. Each day we carried our lunches. Since we were away from our headquarters at meal time, we were reimbursed for the cost of our meals. I do not remember why, but by agreement we all charged twenty-five cents for the meal. This may have been one of the earliest cases of price-fixing in the Minnesota Forest Service. My lunches were made up for me at a restaurant but I cannot recall that I ever paid more than the twenty-five cents for them.

When the line was completed for a distance of about fifteen miles, it was decided that we were wasting too much time driving the Model T back and forth to Park Rapids. If we camped near the Itasca Park end of the line, we would be able to get in a full eight hours work each day. So to save the time as well as the wear and tear on the puddle-jumper, we set up a tent camp near the south boundary of Itasca Park.

This arrangement was agreeable to all of us since we were all single. Now the state would furnish us with food for three meals each day. Of course we would need to do the cooking on our own time, sleep on the ground and fight mosquitoes. But we had no place to go (who can go far anyway on \$80.00 a month?), and after all we did have a job in rather tough economic times. One week Dana brought his car (a 1923 Model 490 Chevrolet) and we spent our evenings exploring Itasca Park.

While we were at this camp we had some assistance. Alfred Nelson had just joined the organization and had been assigned to the Itasca Park district. He worked with us only a few days before he was given another assignment. Al was later associated with the Minnesota CCC program and still later was the editor of the *Minnesota Conservation Volunteer* (now known as *The Minnesota Volunteer*).



Thorpe

By the time the Park Rapids - Itasca Park telephone line was completed, plans for the 1927 fall fire season had been made for the district. It was decided that Allen Stone's father, a retired medical doctor, would be the lookout towerman at Smoky Hills, where there was a cabin. I was to go to Thorpe (the township name) lookout tower for that fall. Since Doctor Stone was an elderly man and I was young, I readily agreed to the arrangement. It was sometime later that the tower name of Thorpe was changed to Mantrap Valley. A forty foot steel tower had been erected there but had not yet been used. I was to sleep in a tent and do my cooking outside.

Since there was no telephone line to this newly erected tower, one would need to be built. This was planned to be a simple grounded or one wire line. A part of the line would be hung from trees and a part would be on poles yet to be placed. Dana, Fritz, a fellow by the name of McCoy, and I were to do the job. McCoy must have just come to work for the Forest

Service as I had not seen him before and he must have quit right after that project because I never saw him again.

The project was about twenty miles from Park Rapids so we went fully prepared to camp. In fact we were so well prepared we had springs and mattresses to sleep on. The construction was to start at the Thorpe township town hall where our line would connect with the township owned telephone system. We intended to make our camp there but after looking the situation over we decided against it. There was no open space to set up our tents and no water well and it looked like a mosquito haven. Down the road a mile was the Licke School, a water well and an open grassy yard where we could more easily make camp.

The Licke School had been so named because it was adjacent to the Licke farm. The two Licke boys, Jake and George, were around our camp each evening during the time we were there. I often wondered if there had been something about their association with that camp which prompted them later to join the Minnesota Forest Service.

Our camp setup consisted of only two tents. The large tent, probably eight by twelve feet and with the bed springs directly on the ground, was for sleeping. The small tent, six by eight feet, was where the groceries, dishes, tools, and other supplies were kept. A small wood burning cookstove was set up near the small tent. We had taken along a few pieces of lumber so that we might have a place to sit while we ate. First we built two benches which used up most of the lumber. By using aspen poles for the legs and the remaining two short pieces of lumber for the top, we were able to have a table only three feet long and less than two feet wide.

As was common practice in Forest Service work camps, we took turns cooking. It made no difference how good or how poor an individual was as a cook, he took his turn. There was seldom any belittling of anyone's cooking probably because even the best was not that good. If one commented about the



The Teepee sign.

potatoes being too salty, it was usually quickly followed with, "But that is the way I like them".

For some reason Dana and McCoy did not exactly hit it off. Little arguments would erupt quite regularly during work hours and were often continued in camp. Toward the end of one particular day, Fritz had gone to camp a little early to prepare the evening meal. He had fried pork chops, boiled potatoes and made gravy. Fritz was the only one of us who could make good gravy. This was one of the days when the Worrall - McCoy argument had been brought to camp and Dana was getting the better of McCoy. As the well-warmed discussion continued, Dana and McCoy sat down to eat. They sat down directly across from each other at our very narrow table. In fact their tin plates were practically touching. McCoy was the first to have his

potatoes mashed and the gravy on them. He stuck his fork into the mixture and deliberately flipped it. A good sized chunk of potatoes and gravy hit Dana's cheek and stuck there. Dana made no move to take the potatoes and gravy from his face. He kept talking rather quietly and calmly while he fixed his own potatoes and gravy. He took his time in putting on lots of gravy. When he had it to his satisfaction, he slid the plate off the table onto the palm of his hand, pushed it full into McCoy's face and gave it a firm twist. Quickly the action began. They were about the same size and no one got hurt before they were parted. It surely did look funny seeing them fighting with potatoes and gravy on their faces and I still smile when I think about it.

When the telephone line was completed, the camp and I were moved to the Thorpe tower. We set up the same two tents and I was able to keep a spring and mattress. As the nights became cool and the mornings frosty, it was rather comforting to be able to build a fire in a stove even if it did sit out in the open. I was once again back to the eight gallon cream can for my water supply.

Dana would come up about once a week since Thorpe was in his patrol district. He would bring any groceries I needed and always another eight gallon cream can filled with water. He would usually stay over night and we often did some road work. As it rained very frequently for a period of some three weeks, I am certain that I spent more time digging rocks out of the road than I did at tower duty.

It was eventually decided that if there was going to be a fall fire season at all, it would be very mild. With this in mind, plans were made to build a tower cabin at Thorpe. If fires did become a problem, the project could be quickly terminated. Since it was likely that the building project would continue into cold weather, plans were made for that eventuality.

Dana came up with considerable lumber and a twelve by sixteen foot wall tent. We built a wooden floor the size of the tent and with more lumber built the sides up about four feet. We

set the tent up over this structure, making the the center of the tent really high. The sides were a full six feet which meant we could stand up anywhere inside. We folded back the canvas front of the tent and completely rebuilt it with lumber. This made it possible for us to have a more weather tight wooden door for the colder fall weather which was certain to come. It also provided a more convenient place in which to cut openings, which we surrounded with tin, through which we could safely put the stove pipe for the two stoves. Even though it was a bit crowded, we were able to have a double width double bunk, a heating stove and a cook stove as well as a large table and benches.

I wasn't going to be a towerman any longer. Now I would work at building a cabin with Dana and Stone. Don Bradt had been brought up to be the towerman on fire days and to cook for the the four of us every day. Don had not had a great deal of experience at cooking but he did manage to get by. But he was a good piano player. He, Scoop Szusitzky and someone else comprised a group that played at Friday night dances. Scoop played the saxophone and the other fellow played the drums. However this group did not function very long after Don started work at Thorpe.

The first Friday evening Scoop drove to our camp to get Don and take him to the dance. The dance was not over until the wee hours of the morning, and because of the poor road to the Thorpe tower, Scoop refused to bring Don back to camp. We had told him about an old logging road from the Licke school to near our camp and that was where he let Don off. The logging road was not drivable but it was good enough for walking and only about a mile long.

The Saturday morning after Don had walked back to camp for the first time, he opened the conversation with, "You are not going to believe this, but I heard a bear when I was walking back this morning". He was right, none of us believed him but we did not say so. We did ask questions, and his answers

convinced each of us individually that he had not heard a bear but something else. Little noises of the night often sound like big noises.

The following Friday evening Scoop again came for Don. After they had left, I said to Dana, "Since Don heard a bear last week, don't you think we should have him see one?"

Dana enthusiastically agreed that we should and said, "Do you have an idea?" I did since it had been on my mind, off and on, all week. I believed that I had finally thought of a way to accomplish it.

We had a cardboard box about three feet tall and maybe a foot square. On one side, near the top, we cut two holes about the size of a quarter, and about six inches apart. This would be our bear after we stood it on end over a lighted kerosene lantern. About twenty rods from camp down the old logging road, we found the broken off top of a small aspen tree with the dry leaves still attached. To one side of the logging road and near this broken tree top, we set up the cardboard box. The lighted lantern was under it with the holes facing toward camp. A few feet closer to camp we stretched a string across the logging road, ankle high, from the dry aspen top and tied it firmly to another tree.

We tried it out and it worked perfectly. He would hit the string as he walked, the dry aspen top would be moved as the string broke, and the rattling of the leaves would certainly cause him to look back. While the light behind the holes in the box did not look like eyes to us, we were satisfied they would to him. We reset our trap and went back to camp and to bed. Since we thought he should be moving fast enough to make some noise, we were positive we would hear him when he came. However, none of us heard him arrive.

In the morning when Don raised his head from the pillow there was no question but what he had been scared. I never saw a man so pale. As he prepared breakfast, he gave us all the details - how he heard the noise, looked back, and really ran

when he saw the eyes. While Don was relating this, Dana slipped out to gather up the box, lantern, and string. He saw a sandy spot in the old logging road and made some marks with his knuckles.

As we ate breakfast, our questions hinted that the entire situation may have been his imagination. Now he insisted that we go with him to find the spot. With a little assistance he located the marks Dana had made with his knuckles. That clinched it. He had seen a bear. And the bear put an end to the Friday night dance playing. Scoop would not drive the road after dark and Don was not about to walk that old logging road again after dark.



Slash Inspection

For the first twenty years following its establishment in 1911, the Minnesota Forest Service was strictly a fire prevention and a fire suppression organization. An important phase of fire prevention was fire hazard reduction. This was largely accomplished by the inspection of timber cutting on privately owned land and recommending proper management of the resulting slash or debris.

In 1925, a significant forest law was enacted requiring that all cutting of forest products, except fuel wood, be reported annually in writing to the State Forester. This legislation made it necessary for the Forest Service to examine logging operations and recommend how the resulting debris should be handled to reduce any possible fire hazard. Such debris was more commonly referred to as slash and the examination of private logging operations came to be known as slash inspection.

The word slash had a rather broad meaning and generally included needles, leaves, large and small branches, non-utilized tree tops and any other material remaining after the wood

products were removed. The amount and type of such debris, as well as where it lay and how it was distributed, were prime factors in determining if a fire hazard did, in fact, exist.

The application of the timber cutting law was largely confined to privately owned forest lands. Provisions did not exist for the sale of small tracts of state owned timber. Only large blocks of state owned timber were sold at auction by the State Auditor in extreme northern Minnesota. In those cases slash disposal requirements were a part of the sales contract.

As I had been told, the end of October brought my summer's employment to an end. Everyone referred to this as being laid off. Because of a special appropriation planned for state land reconnaissance, I was fortunate in actually being laid off only over night. I was back at work the following morning in Park Rapids with the provision that I could be kept busy until the reconnaissance project was started in January. I spent a large part of those two months becoming familiar with the timber cutting reporting law and its application.

My introduction to slash inspection was to spend a week with Allen Stone, the patrolman-at-large, examining timber cutting operations north of Park Rapids. At each logging operation he would outline, at considerable length, the several factors that needed to be considered in determining a fire hazard. If we concluded that the timber cutting had created a hazard, we discussed how it might be reduced. In some cases the operator was required to put the resulting slash in small, separate compact piles and leave them to rot. In some cases the operator was told to burn the piles when it was safe to do so. On one operation it was decided that the limbs be cut from the remaining tree tops and spread on the ground. There were many instances when we agreed that no disposal be requested since no fire hazard existed. At the end of the week Stone concluded I was sufficiently instructed and would be able to make satisfactory decisions alone.

On the Monday morning following Thanksgiving Day in 1927, I made my first slash inspection trip alone. Stone had prepared a general outline of travel for me and took me in his Hupmobile to a point near Ponsford. That car was huge compared to a Model T Ford and I can still see him behind its wheel. Stone always wore a fur cap during the winter months and he always smoked a pipe. The faster he drove the more he puffed on the pipe and the car was soon filled with smoke. He always sat with his back straight and gripped the steering wheel stiff-armed but this did not necessarily mean he drove safely. There were many who were never at ease when riding with him.

In my canvas shoulder bag that morning, I carried many things. There was a ham sandwich I had purchased in case of an emergency and an envelope containing the information I would need about those who had complied with the cutting report law. I also carried blank cutting report forms for operators I might find who had not complied with this law. To ensure warm dry feet I carried two extra pair of wool boot socks. Probably the most important items I carried were a compass and the Smoky Hills district field book.

This book would be my guide and I referred to it often. The individual township maps showed the roads as well as many other features. There were lists of settlers by name as well as the designation of state owned lands. There were a variety of symbols associated with maps and settler lists. The most important symbols to me were those that indicated homes where one was most likely to get a meal or to find a place to sleep. There was even a symbol indicating the better places.

I soon learned that the field book information was out-dated so it was necessary to cross out old information and put in new. I was hoping to help the next patrolman be better informed than I was. It had been emphasized that I should spend the nights with rural residents if at all possible. This would provide an opportunity to promote forestry and particularly fire prevention.

Without doubt we became closer to the rural people because of this policy.

At that time nearly all timber cutting operations were carried on during the winter months using horses and sleighs. Even the roads I would be following for the next three days would be only sleigh roads. These roads were never snow-plowed, and as I started my trip, the snow depth in the woods was about ten inches. Sleighs were of a narrower width than the tracks made by the horse pulling them so the action of the sleighs as they slid from side to side created a smooth path at least a foot wide which made walking really easy.

Each sleigh track entering a wooded area could possibly lead to a timber cutting operation. If considerable use was indicated, I would examine it closely. Generally if forest products had been moved over a snow covered road, bits of tree bark could quite easily be seen. When there was such evidence, I followed the sleigh tracks to learn what had taken place.

Most of the time when I found unreported timber cutting, it was on the individual's own property. Usually they had not heard about the timber cutting report law and readily complied with the law by completing one of the blank forms I carried. It had been impressed upon me that I was making the trip to inform those people of the law and to gain voluntary compliance with it. I was not to threaten or make arrests for non-compliance.

At about 3:30 in the afternoon of the first day I inquired about a possible place to spend the night. The woman of the house said that they did not have an extra bed but was certain I would be able to stay at the Emil Swanson's, who lived down the road about a mile. Emil was a full-time farmer and not engaged in logging. Not only did I stay with the Swansons that night but left in the morning with the feeling that they were glad I had stopped. Later I put the special symbol in the field book which indicated good food and a good bed.

Before I left the Swansons, I had some difficulty getting Mrs. Swanson to accept payment for the two meals and the lodging. She finally accepted seventy-five cents. It was a requirement that there be a signed receipt for money expended for lodging even though it was only twenty-five cents. As I went out the door, Mrs. Swanson handed me a small paper sack. When I was out of sight I looked inside. It contained a huge sandwich and a piece of cake. She surely made the outlook for that day's lunch much better.

This sort of hospitality was very typical of the rural residents of that period. Guests were a special delight during the winter months when they had few contacts with people except possibly for close neighbors. Very few people in rural areas even had a radio. There were practically no rural electric lines and battery operated radios were expensive to operate and far from satisfactory.

Each day's work was nearly the same. Walk the roads, talk with loggers, hope for a good place to eat and sleep, and watch for more side roads and timber cutting operations. At each timber operation, I made the necessary recommendations in connection with the logging slash. When possible, I talked to the logger about the disposal requirements. Walking the roads I often met people who always stopped to talk. It was not only because I was a stranger and they were curious, but rather because they were friendly.

My experience in finding a place to spend the second night was nearly the same as the first. This time when I stopped to inquire, the woman of the house made certain I had a place to sleep by telephoning a neighbor. They too were most gracious and again I had some difficulty in paying for the meals. It was only when they were assured that I would be reimbursed, that they accepted payment. Once again I put the special symbols in the field book.

The following day I came into a rural area where nearly all the settlers were Finnish. A true Minnesotan usually referred to Finnish people as Finlanders. There were now fewer well developed farms and more forested land. I knew I would soon be getting to the Maki timber cutting operations. I had been told that Maki was a larger operator and probably had a logging camp and I hoped to spend the night there.

It was about mid-afternoon when I came to a small camp. I saw a larger building with smoke coming from a stove pipe and a small building which I assumed would be the bunk-house. There was no question about the horse barn; a pile of manure on one side and a stack of hay on another side of a very crude structure. The other buildings had the tarred paper exteriors typical of logging camps. The paper on the two buildings was held in place with narrow vertical sawmill edgings. The same tarred paper was on the outhouse but was held in place with one-inch-diameter tin discs with a nail in the center of each disk.

I rapped on the door of the larger building since that was the one that had a fire inside. Mr. Maki and Mrs. Maki, who was the camp cook, were there. The building was a cook shack, mess hall and the place where the Maki's lived. I told them who I was, why I was there, and asked if I might spend the night. There was a short conversation in Finnish before I was told I could stay. Since there was considerable time before dark and meal time, I spent the balance of the day looking over the cutting operations. I determined there would be very little slash disposal required and discussed this with Maki later.

When I returned to the camp, three more men were there. Mrs. Maki was preparing the meal and the three men were sitting at the table talking in Finnish. I was told in English where I could wash and where I could sit at the table. Maki came in and the conversation among the four men continued in Finnish. As we ate, Maki spoke to me a couple of times in English. After we



Logging with horses.

finished the meal, Mrs. Maki cleared the table but no one else got up. I looked around and understood why. There was no place to sit except on the benches at the table.

As they continued to talk in Finnish, one or another of the men would glance at me. As a boy I had heard some rather wild stories about Finlanders; that they were fighters and were handy with knives and axes. I soon began to feel as if they were talking about me.

Eventually it came time to go to bed and Maki told me that I could sleep on the cot in the bunkhouse. The three workers slept in built-in bunks. They kept talking in Finnish and completely ignored me. By this time I was afraid to try and start a conversation in English. I was mighty uncomfortable but I did manage to get to sleep.

Immediately after breakfast the three workers went to the woods. Again I experienced the same difficulty in paying Maki for the meals, but eventually he accepted a half-dollar. Then I

found that Mrs. Maki had fixed a lunch for me to take along. As I hiked down the road, I concluded that all those stories I had heard about Finlanders just could not be true.

During my travels that day I crossed over a stream. Back from the road I could see an old log structure which aroused my curiosity. I waded through the snow to get to it. I had heard and read about old logging dams so recognized it for what it was. The logs were mostly rotted away but the outline of the structure was well defined. To one side was the sluice-way which years before had sent logs on their way to some sawmill. As I looked over the tree tops, I could almost hear the rush of the water as it carried the huge pine logs downstream. I learned later that it had been more than thirty years since it had been used.

For the balance of the week I zig-zagged my way through the area. I saw more logging operations and discussed the reduction of logging slash fire hazards. I had walked nearly 100 miles during the week, looked at nearly three dozen logging operations, and had talked about fire prevention to a still greater number of people. To me it was a very satisfying week, and I felt I had made many new friends for the Minnesota Forest Service.

It was late Saturday afternoon when I arrived back in Park Rapids. Stone listened intently as I reviewed what I had seen during the week. I felt I had accomplished something as Stone sat puffing on his pipe and nodding his head as I talked. When I finished, his immediate response was, "How would you like to make another such trip?" Since I had enjoyed the one, I was able to tell him I would be willing to go on another.

The following Monday morning I started my walk from the ranger station. My general direction was east and I went near the villages of Dorset, Nevis and Akeley. To get around Leech Lake I needed to go through Walker. From there I worked my way to Longville, arriving there on a Saturday afternoon. All the way I had inspected timber cutting operations, ate and spent the nights with rural settlers. There was no hotel in Longville and those

were the days before motels. I was told that I might be able to stay with the Harry Mathews family who lived a couple of miles east of the village. They were able to accommodate me and I spent a most enjoyable weekend with them. There were three teen-age children so it was much like being back home on the farm. There was lots of card and game playing and a large pan of freshly popped popcorn on Sunday evening.

On Monday morning I began walking to the south-west and got to a number of logging operations before reaching the village of Backus. From there I went west and north through the Badoura and Hubbard areas and again arrived back in Park Rapids on a Saturday afternoon. In those two weeks I had walked more than 150 miles and had thoroughly enjoyed it all. I think often of that experience and the many wonderful people who made that assignment such a pleasure.



Bena Reconnaissance

The letter read, in part, "On January 2, 1928, take a bus and get off one mile east of Bena. Follow a winding road south until you come to a rambling frame house near Six Mile Lake which will be the Bena camp headquarters." The letter was from Arthur F. Oppel, Deputy State Forester, and I was being assigned to state land reconnaissance for the balance of the winter.

Two separate reconnaissance crews were being formed and each would be working where there was a concentration of state owned forest lands. The purpose of the reconnaissance was to obtain detailed information about timber cover types as well as size classes on these lands. The other camp was to be located at the rock cut on the Backus logging railroad line south of International Falls.

There was no map in Park Rapids of the Minnesota National Forest (renamed the Chippewa National Forest on June 22, 1928), so I was unable to determine just where Six Mile Lake was located. Since Oppel had referred to it as the Bena camp, I could only believe that it was near that small village. At the very

least, I felt, it should not be far from where I would get off the bus.

After the bus pulled away, I could see only one snow-plowed road and that led to the north. According to a sign nailed to a large pine tree, the road went to Winnibigoshish Lake Dam. I again read the letter to make certain it stated I was to go south, and it did. A closer examination in that direction revealed an opening through the trees which could indicate a summer road. Wading through ten inches of snow to this opening satisfied me that it was indeed a trail. With a great deal of apprehension I decided to follow it.

After taking out my compass, I shouldered the packsack which contained my clothing and other needs for the balance of the winter. As I started down the trail, I decided whoever selected this route must have been there months before. I had not walked far in the ten inches of loose snow before I wished I had brought my snowshoes. I had not brought them because the letter stated that snowshoes would be furnished.

When I got off the bus just before noon, it was very cloudy and threatening to snow. Before I had gone far, I knew I was following a very winding road and used my compass often to make certain I was going in a southerly direction. After an hour it began to snow heavily and the sky darkened still more. The farther I went, the more difficult the walking became. After two hours of walking southward, still another check with my compass told me I was going northwest. Because of the heavy snowfall, the darkening sky and the poor visibility, I had gone around the lower end of Six Mile Lake without seeing it. Because I was going back north, I became greatly concerned. I decided that in the two hours I must have walked five or six miles. If I turned back, it would be dark before I reached the highway where I started. I decided to continue on a little farther.

After another half hour of trudging through the snow, the trail came out of the trees and into an open space. I was in a small field, and through the falling snow I could faintly see a

house. It was only one story in height and appeared to be spread out so maybe this was the rambling frame house. As I crossed the small field and the visibility became clearer, I could see the snow piled high on each of the three brick chimneys. There was no way the house could be occupied, but I would check it out before I turned back.

As I went around the house, I could see sleigh tracks but no sign of a sleigh. The back door was open and I heard some noise, which made me believe someone was there. Inside I found Tom LaLone struggling to move a large heating stove to where it could be connected to one of the chimneys. Tom had arrived only a half hour earlier. He was the patrolman at Remer and I had not met him before. Tom had been directed to go to Bena and had gotten there just in time to catch a ride with the man who had a team of horses and was bringing a load of supplies for the camp.

Between the two of us we set up the heating stove. It was a real chore as there was a variety of stove pipe lengths but none that exactly fit. We had nothing to cut the correct lengths so we moved the stove back and forth in order to use the pieces we had. We ended up with a very sloppy looking job but were able to get a fire started. Fortunately a squirrel had not made a nest inside the brick chimney so everything worked properly.

In order to eat we needed to set up the cook stove in the kitchen. This was still more of a job as the range was a large camp size, and it was all the two of us could do to move it. Again we had to deal with the same collection of stove pipe lengths which meant many moves before we could fit the range to the available stove pipe lengths. Again we were fortunate this chimney was not plugged and soon had a fire going.

Because of the time of day as well as the very cloudy sky, it was nearly dark. We sorted through the boxes that had been on the sleigh and located some kerosene lanterns. Thankfully there was sufficient kerosene in one so we had light. We were grateful that the man with the sleigh had thought to bring along some

wood for the stoves. Had he not, we would have been out with the lantern attempting to find a dry dead tree we could make into fire wood. When I arrived I noticed the well out back. We found that the pump handle could not be moved so we knew the well was frozen. We decided not to try to thaw it out that night but to melt snow for any water we might need.

The sleigh load had included a supply of double width mattresses but neither bed frames nor springs. We piled four or five mattresses one on another and made a bed on them. We decided to sleep together as we were certain it would be mighty cold in that house before morning, and indeed it was.

Tom had been told that somewhere on the sleigh load there would be some groceries left from another camp. It was now long after meal time so we sorted through every box. The only groceries we found were a part of a small package of pancake flour and about a peck of potatoes. Later we found that the potatoes had been frosted, probably on the trip out on the sleigh.

We peeled some of the potatoes and boiled them after we melted snow to obtain water. Also we mixed up half of the pancake flour with melted snow water. The pancakes were made without benefit of grease and with no cleaning of the griddle. They came off very dry and we ate them minus the normal butter and syrup. It was then we learned the potatoes had been frosted as they had a sort of sickish, sweetish taste, definitely nothing to excite the taste buds.

After an extremely cold night we made pancakes with the balance of the flour, which, with the remaining frosted and boiled potatoes, was our breakfast. Apparently a little of the old grease had remained on the griddle when we used it the night before. In the morning the cakes stuck to the griddle and we had a tough time removing them and they were drier than dry. Still no butter nor syrup. The potatoes also tasted much worse, so we really looked forward to the return of the sleigh with some groceries.

With nearly empty stomachs, we worked on the well and were able to get it thawed so there was well water available. Shortly before the noon hour, the sleigh arrived with the second load of supplies. Walking behind were most of the rest of the crew. All of them had been told to go to Bena where they had spent the night in the hotel. I was the only one who had been sent the long way around and I never was able to learn why.

Harold Ostergaard (Ostie) had been designated as the chief-of-party.

Others I can recall were John Fritzen, Jim Gannaway, W.L. (Buck) Holter, C.C. Carlton, Hyman Goldberg, Odd Berg, and H.D. Leyde. Al Rehard, a former cruiser for the Red River Lumber Company, came a few days later to locate government land survey corners and keep the crews supplied with starting points. A fellow by the name of Deison was to be the cook but for some reason was unable to be there the first two weeks. Ostie asked for a volunteer cook for that period of time and Leyde raised his hand, probably because he was having some hemorrhoid problems.

Leyde was willing and tried hard, but he was not a cook. But we did get by even though there was some grumbling. After about a week, both the kitchen floor and Leyde's apron were getting pretty greasy. Jim suggested to Ostie that he should order a pair of skidding tongs. Ostie, who seldom saw the humor in anything, couldn't understand why. Jim said, "Some day Leyde is going to slip and fall on the kitchen floor and the only way anyone will be able to get a hold on him and get him back on his feet will be to have a pair of skidding tongs."

The day following our arrival, when all the field crew members were there, Ostie conducted a training session. This was the first time anyone in the Forest Service had been assigned to reconnaissance, so it was new to all of us. We were to work two men to a crew and the same couple would always work together. At designated plot locations one man would do the compass work, tally distances and record the timber types

and size classes on special sheets. His partner would map the timber type changes and determine the tree species and tree sizes on the plots. It was recommended that the crew workers exchange duties on alternate days so each would obtain training in all phases of the work.

Each crew carried a tape to measure the radius of the 1/4 acre plot. We were also furnished with a special tape to measure the tree trunk diameters at breast height (DBH). After a few weeks we had become reasonably accurate in estimating the exterior boundary location of a plot as well as the tree diameters. We would use the tapes infrequently and only to make certain we were estimating correctly.

The selection of the crew partners was not the choice of the individuals but was made by Ostie. I recall how disappointed Jim was when he learned I was to be his partner. Except for running a compass and pacing, I realized I had a lot to learn. Jim indicated that he expected his partner to know much more. But after a couple of weeks I felt I was as well qualified to do the work as he was.

It did not take long for me to learn that Jim was not the most agreeable person to work with. The one thing which probably contributed most to his bad disposition was our difference in weight. Jim was a big man, weighing over 200 pounds, and I weighed less than 150 pounds. In a matter of a few weeks the snow was nearly three feet deep. A few warm days had created a crust which was just enough to support me on snowshoes, but not so with Jim.

The state had furnished only one size of snowshoes, thirteen by forty-eight inches. They were a good size for me but far too small for a heavy person. When I was running compass, I would be in the lead and most of the time could travel over the snow and hardly leave a sign of a track. Jim would come behind, and because of his weight, would break through the crust and flounder in a foot or more of loose snow. All the time he would be making some rather nasty remarks, more often

about the snow but some times about me. When Jim was running compass, he would break through and be having the usual problems. It was much easier for me to walk to one side and be on top of the snow crust. When he saw how much easier I was having it, he would let go with another stream of bad words.

We had not been in camp much more than a couple of weeks when Ostie announced one evening that two crews were going to Mud Lake to work from a side camp. The U.S. Forest Service had a lookout tower and a small cabin on the lake which was furnished except for blankets. This was about nine miles from the Six Mile Lake camp and where there was another concentration of state owned land. Tom, Hyman, Jim and I were designated to go. From the acreage of state land, Ostie had estimated it would take us at least two weeks to examine it all.

With our packsacks well loaded with blankets, groceries and our personal needs, we left on a Monday morning. The balance of that day was spent cutting wood and cleaning the cabin to make it livable. It was necessary to carry all our water needs from the lake. The second day we learned that nearly all of the state land was open marsh. Because of the federal dam at the outlet of Leech Lake, the water level of Mud Lake was constantly fluctuating so no tree growth had ever been established. We made many snowshoe miles covering all those state lands but spent little time in taking timber type plots. By late on Saturday we had completed mapping the lands we were there to do and agreed we would spend the following day at Mud lake and pack back to the Six Mile Lake camp on Monday. We had no more than made that decision when Ostie arrived. He had brought more groceries, primarily fresh meat, and was there to learn how we were progressing. When he learned we had covered all the lands and had checked our field mapping, he decided we would pack up and return to Six Mile Lake camp on Sunday. That week we lost our one day of rest.



Returning from Mud Lake.

Some five miles or so to the south of the camp was another concentration of state owned land. This was immediately adjacent to the Leech River and westward to just east of the village of Federal Dam. Again it was determined that it would be inconvenient to look at those lands with daily treks from the main camp. Since Tom expressed some knowledge of that general area (part of it was in his patrol district), Ostie sent him to try to locate a place for four men to stay. Already we had been informed that Tom, Hyman, Jim and I would again make up the two crews for this assignment.

Tom returned late in the evening of the second day. In the presence of the entire crew, Tom reported what he had found. First, he located a good place to stay, but only for two men. It was a farm place at the east end of the state land concentration and the men would need to only bring blankets. The other place was not so good, Tom reported. It was the old barnlike hotel at

Federal Dam where the food was poor. He had stayed there the one night he was gone from camp so he had first hand information.

Jim really blew up. "You're not fooling me one bit," he said. "If that is the way it is, Don and I (he had not consulted me) will volunteer to go to the bad place in Federal Dam."

But Ostie had a different view and said, "You and Don are going to the farmer's." This didn't put Jim in the best of moods. So the following Monday morning Jim and I, with our blankets and extra socks for a week, set out for the farmer's place on the Leech River. Jim's mood was bad when we left camp and much worse by the time we went to bed after a rather poor meal.

The following morning after breakfast, which again was not a good meal, Jim made a trip to the outhouse. When he returned he said he was sick and had lost his breakfast and we were going back to camp. I knew what this would mean. If I went with him, I would get a new partner and snowshoe back those five miles. So I said, "No, I will work alone until someone comes to work with me." Jim took off for camp, a little perturbed because I would not accompany him.

For two days I worked alone. I located a couple of authentic section corners for future starting points and took a few plots alone. At the end of the second day Buck Holter came snowshoeing in. We worked together the balance of the week and completed the work that was to be done on that section of the Leech River. We returned to the main camp late Saturday. Buck and I were working partners for the balance of the winter.

By the time we returned to camp, the crews there had nearly completed checking the lands within snowshoeing distance of camp. Already plans had been made to move into an old house in the village of Bena. The move was made the following week. Bena was not a modern village and was commonly referred to as an Indian town since the population was mostly of the Chippewa tribe. There were no electric lights and no running water in the house. One difference was that at night we heard Indian dogs

barking instead of coyotes howling. A bigger difference was that there was a pool table in the lobby of Tom Shehe's hotel. Now we had a place to go on Saturday evenings.

It was not long after we moved to Bena that I learned that Park Rapids would be in the regional high school basketball playoff. The game would be at Bemidji on the following Friday evening. A bus going to Bemidji, we learned, would stop at Bena after our regular working hours. A morning train from Bemidji came back through Bena at 4:30 A.M. Buck and I decided to go to the basketball game.

Everything was on schedule and we were back in camp just as Deison, the cook, was beginning breakfast so we barely got to bed before the breakfast call came. After we had eaten, Ostie announced that Buck and I were to accompany him to get three forty acre tracts, west of Winnibigoshish Dam, which were far removed from other state lands. This meant a ten mile snowshoe trip each way in addition to the work we would need to do on those 120 acres.

We could not help but wonder if the trip had been purposely planned for that day because we had been up all night, but we made it without one word of complaint. In the many years that followed I wanted to ask Ostie about it but would not give him the satisfaction of believing it bothered me. But that Saturday night we did not go to Tom Shehe's to play pool. We went straight to bed.



The Wolf Lake Telephone

It was Minnesota Forest service policy that each fall, and at the conclusion of the fire season, telephones be removed from the lookout towers. Each spring they would be reinstalled, and usually the telephone line needed repairing, before the beginning of the fire season. Nearly all lookout towers were somewhat isolated, so the work in the spring could not be done until the snow had melted on the trails leading to the towers. By this time the normally frozen ground was in the process of thawing, and driving the roads was most difficult.

Very few of the main highways of northern Minnesota were paved in the 1920's. Township roads, which generally were not even gravelled, were usually in the very worst condition. By early April of this particular year, the winter's snow was nearly gone and the frozen ground was thawing. Already there was danger from grass fires, and there could be forest fires within a few days. It was of great importance that the tower telephones be installed without further delay.

Scoop Szusitzky and I were delegated to go to the Wolf Lake tower, install the telephone, and make certain that the telephone line was in working order. We were to take the Model T Ford, the puddle-jumper. The motor of the Model T had just been over-hauled. I suppose today it would be considered rebuilt.

The common practice then, especially with Model T motors, was to have the bearings tight when the over-haul was completed. This practice included the crankshaft bearings as well as the connecting rod bearings. And the ones on this Model T were indeed tight! These bearings were supposed to gradually wear to a perfect fit.

In fact the bearings on the puddle-jumper were so tight we had to jack up one rear wheel and put the car in high gear before it was possible to crank it. I believe we had to use both the battery starter and the hand crank. When the motor did start, the trick then was to stop the spinning jacked-up wheel with the brake, remove the jack, and get the wheel back on the ground without the motor stopping. After several attempts this was accomplished and we were on our way.

We had an early start - just after 7 A.M. - hoping to get most of the way there before the warmth of the day would create still worse road problems. It had been below freezing during the night so the mud was slightly firm. However we were certain that a few hours of warm sunshine would soon create problems.

As we drove west on the gravelled state highway we realized the Model T had little power, but neither of us were that familiar with newly over-hauled motors and did not know what was happening. It was when we were off the main highway and on the ungravelled township road that we knew we were headed for trouble. The township road was already well rutted from previous travel and the frost was leaving the ground. The wheel ruts were six to eight inches deep and so numerous there was no way to stay out of them. If one was successful in getting out of the ruts, the now thawed and muddy road surface would cause

the wheels to slide back into the ruts. Soon we arrived at that part of the road which was all clay soil. Now we were in for real trouble but with a "Never turn back" attitude, we continued forward. The ruts were getting deeper and the Model T seemed to have less and less power. The all-clay soil road was becoming more slippery and the sun becoming still warmer. And we were moving more slowly.

A mile farther on we could move only in low gear. Constant pressure had to be kept on the low pedal of the Model T to keep it moving. Soon it was necessary for the person not driving to jump off and do some pushing so that we could continue moving forward. Before long there needed to be constant pushing. We took turns pushing on the low pedal and pushing on the back of the Model T. Now the ruts were so deep it would have been impossible to turn around.

We eventually made it to the base of the tower hill and left the puddle-jumper there. We could see that it would be impossible to drive up the hill so we carried the telephone and equipment to the tower. We soon installed the telephone, put the line in working order, and were again on our way. But we knew our day was far from over as we still needed to get back to Park Rapids.

It was now long past the noon hour and the day was becoming unusually warm for that time of year. As we drove, and pushed, the wheel ruts became deeper and the clay soil more slippery. As the day wore on, the power of the Model T was not improving and one of us was continually pushing. We came to a country store and stopped to purchase some cheese and crackers. We already knew it would be very late before we reached Park Rapids, and there would be no other food before we arrived there.

While we were at the store we thought about the lights on the Model T. We found there was no wiring leading to the headlights. In the over-hauling of the motor the wires had apparently been removed but not replaced. We were five miles

from the highway, and at the pace we had been moving it would be dark long before we arrived there. At that point we decided that we would only try to get back as far as the Smoky Hills station where there was a bed and blankets. We could drive to Park Rapids after sunrise the next morning and get there before breakfast.

We seemed to creep as we continued on our way, coaxing and pushing the Model T. It became dark, but we had no fear of leaving the road. In fact there was no need to steer as the wheels merely followed the deep ruts. We began to feel that we would be fortunate if we could get to Smoky Hills.

It was long after sundown and very dark when we reached the Smoky Hills trail. What a change! We were now on a sandy soil road with no ruts. The trail ran through a well stocked stand of jack pine trees.

Scoop happened to be driving. He was zipping along at maybe ten miles an hour, which seemed fast compared to the speed we had been traveling. It certainly seemed very fast to me as I could not see the trail and began to wonder if Scoop could. I questioned him about his apparently superior vision. He had just answered, stating how well he could see, when we were suddenly jolted to a stop.

The sudden stop had killed the motor and the night was all quiet except for the sound of running water. The water was running out of the radiator. Strictly by feel, since it was that dark, we found we had hit a six inch diameter jack pine tree, and that we had hit it with the exact center of the radiator. We knew we were going no further with the puddle-jumper that night. We, and not the tree, were the one out of place as we found we were more than fifty feet off the trail. How we got that far without hitting something was definitely a mystery. And Scoop had just told me how well he could see the trail we were not even on. We walked the half mile to the Smoky Hills cabin and went to bed.

Shortly after daybreak we were back to survey the damage. A broken tree limb had punched a hole through the radiator. The flimsy bumper was bent nearly double and the front spring was broken. Because of the broken spring, the front fenders were resting on the tires.

We managed to push the Model T back enough so we could work on it. It was easy to pull the limb from the hole in the radiator but what a hole it left. We jacked up the front end and made some blocking from a tree trunk to put between the front axle and the broken spring. This prevented the fenders from rubbing on the tires. By using a pry pole we took enough of the bend out of the bumper so we could tie it up. We walked back to the cabin and got four Buffalo pump tanks, all that were there.

Without water in the radiator we drove the few hundred feet to the Shell River. Here we tried to fill the radiator, but as we expected, the water ran out nearly as fast as we put it in. We filled the four pump tanks and started out, not knowing how far we might get.

With Scoop driving, I sat straddling the hood of the Model T. From a Buffalo pump tank I pumped water into the radiator. When one tank was emptied, we stopped just long enough to replace it and away we went again. We made it to Park Rapids on the twenty gallons of water and arrived just as Dana Worrall was starting out to look for us. At least it felt good to have been missed.



Longville

On April 1, 1928, I was informed of my first promotion in the Minnesota Forest Service. As of that date I was a forest patrolman and was to be assigned to the Longville patrol district. My salary was to be \$90.00 a month and I was given the official badge. As with the key, the penalty for losing the badge had been set at \$5.00. The round nickel-plated badge was a little over an inch in diameter. The words, "Minnesota Forest Service," were printed around a scene depicting a forest of trees, a river, and a canoe.

A forest patrolman was expected to have an automobile capable of transporting the necessary fire suppression tools as well as a fire fighter or two. The reimbursement rate for the automobile was set at 3 1/2 cents a mile. It would be necessary for me to purchase a car.

I had often dreamed of my first car but had felt that there would need to be three requirements. Seldom were there cases when a parent or someone else purchased a car for a young person. It was felt that a young person should first be of legal



The round badge.

age. Then he should have a need for a car and earn the money to purchase one. I now felt that I had fulfilled all those requirements.

Almost every young person has visions of what his first car would be like. What fulfilled my dream was a 1927 Chevrolet coupe. Since we were only a year or two past the time when all cars were black, I was really taken with the fact that it was a robin's egg blue and with black fenders. The normal wooden spoke wheels had been replaced with steel disc wheels (also blue) which gave it a really sporty appearance. It had all the latest equipment including demountable tire rims. The trunk was large enough to carry the few shovels, axes and the Buffalo pump tanks I would need in my district. I paid a total of \$375.00 for my dream car.

The Longville patrol district of twelve townships (over 1/4 million acres) had just been made a part of the Park Rapids ranger district. Previously only four of the townships had been



The 1927 Chevrolet coupe.

in the Park Rapids district. The other eight townships had been divided between the Brainerd and Deer River ranger districts. LeLand Orton had been the forest patrolman for all twelve townships, but the arrangements had not worked out satisfactorily because of the divided supervision.

My headquarters was a small three room cabin with the common tarred paper exterior. It was at the lookout tower and about two miles from the community of Longville. The tower was only forty feet in height, had an open cab with a roof and was scheduled to be replaced soon with a taller and more modern structure.

The kitchen had a watch-fob size cook stove and the familiar orange crates for cupboards. The standard New Maple wood burning heating stove with the small green woodbox beside it, was prominently placed in the larger of the three rooms. The woodbox lid had the usual "Keep this lid closed" on the inside of the cover. The psychology was that with the lid closed no one would be tempted to toss matches, tobacco or other waste



The Longville cabin.

material into it. This large room doubled as the living area and the storage area for the fire fighting tools.

How well I remember the four Buffalo pump tanks. They were tall and round, held approximately five gallons of water and had the carrying handle more than twenty-six inches from the bottom. They definitely had not been designed to be carried where there was brush. A man six feet or more in height could carry a filled one reasonably well. Some could carry two. When I carried one, I had to lean sideways to keep the bottom from dragging. It was a great improvement when the GMC (Grover M. Conzet) style pump tank came into use a couple of years later. But the Forest Service of those older years never threw anything away, so the Buffalo tank continued in use long after all districts were well supplied with the new style.

Besides the pump tanks, there were six short handle shovels, a heavy road rake, two round bottom galvanized fire fighting pails and a half dozen burlap bags. The pails had been purposely manufactured with the rounded bottoms so they could not be used for other purposes. Designed in this manner they could only be set down where there was a small depression in

the ground. If there was no natural depression, we were instructed to make one by digging out a shovel full of soil. Can you visualize anyone holding a full pail of water in one hand while attempting to dig a hole with the other?

That spring, while working on one of my fires, I carried two pails of water to some men to use in filling Buffalo tanks. I set one of the pails in what I thought was a suitable depression. Because of the grass I did not see the stick lying crosswise in the depression. The pail upset and the valuable water I had carried a quarter of a mile was spilled. With the side of a double-bit axe blade, I flattened the bottom of the pail so it could be put down anywhere. In the years that followed I saw many pails with flattened bottoms so knew there had been others who had dealt with the problem in the same manner.

I readily recall one other fire which occurred in the Longville district that spring. It was a day of little or no wind and the fire was burning in dry upland grass and ferns in a scattered stand of aspen trees. Enroute to the fire I had asked a man who was working at cutting brush to accompany me and help on the fire. Because of the fuel type, the fire was corralled in a couple of hours and was completely out when we left it shortly before noon. When I dropped the fire fighter off, he invited me to stop and eat the noon meal with him and his family. He said, "The wife will likely have it ready by the time we get there and with the number of kids we have, one more at the table will make no difference." I did not hesitate in accepting as I had eaten a number of excellent meals after similar invitations. And since I was batching, this would mean one less meal I would need to prepare.

As we drove into his yard, I saw a tumble-down log shack and with junk strewn all around. I began to feel that possibly I had gotten myself into a bad situation. By the time the five kids and the rest of us were seated at the table, I knew things were not going to be good. There was a large platter of fried fish, and little else, on the table. I recognized the fish as being suckers, a

rough fish I had speared by the hundreds but had never eaten fried. People I knew ate them only when they had been smoked. In addition I could see they were not fried well but left greasy. Even though my appetite came close to failing me completely, I ate one piece. It did however take lots of bread and boiled potatoes to get that one piece down. I kept telling myself that I was a guest at their table and should conduct myself accordingly. Because of the Forest Service's public relations policy of encouraging frequent eating at rural homes, we had all come to expect incidents of this type.

Dick Willems often told about the time he and Hi Johnson were hiking through a sparsely settled part of Roseau County. After walking for hours and becoming desperately hungry, they arrived at a settler's place. It was not until they were inside the house that they could see the filthy conditions. But they were still very hungry, and it was miles to the next settler. He told the woman they both were very fond of hard boiled eggs and potatoes boiled with the jackets on. She was very obliging and fixed what they had asked for. They felt there was little she could do to spoil those two foods.

At the time I was at Longville it was usual for every community, large or small, to have a creamery. Longville had such a creamery which was located about a mile from the community center. It was on a township road which had been built on the abandoned logging railroad grade of the Pine Tree Logging Company. It was also located on a small creek. Butter was made at the creamery, packed in wooden tubs, and then trucked to market. The making of butter was considered a skilled trade. All butter-makers did not make the highest grade of butter although this one did since they used only sweet cream. There was no market for the buttermilk and it was dumped after each churning and allowed to run into the small creek. There were few, if any, ecologists around small towns in those years so this was a very common practice.

I soon became acquainted with Frank, the butter-maker, since we were the same age and both single. We became good friends, and I soon learned his churning schedule. When possible I would go to the creamery before he drained, flushed and cleaned the churns, and drink my fill of fresh sweet buttermilk. Sometimes he would churn in the evening, and I would help pack butter in the wooden tubs. For this I was privileged to drink still more buttermilk.

One weekend Frank went to Pine River to see his girl friend. It was late Sunday evening when he called me. His car had made a great deal of noise just before it stopped running a few miles out in the country. I towed his Essex to the creamery yard.

A few days later, I was back at the creamery. Frank, who called himself, "A kind of a mechanic," had the Essex motor partially dismantled. The next time I stopped he told me he had it fixed, but I still did not inquire as to what had been wrong.

The day I was to leave Longville for the summer, I went to the creamery to tell Frank goodby and hopefully to drink some buttermilk. I noticed the Essex was gone and that a Chevrolet was parked in its place. Inside Frank was talking on the telephone and each time he spoke, he said, "But I told you one piston was missing." The conversation ended and Frank told me what had taken place. A broken connecting rod had poked a hole in the cylinder wall. This would normally mean junking the car or getting a new block. Frank had a different approach. He removed the rod and piston and plugged both block openings with pieces of cedar he had carefully whittled to an exact fit. He drove it to a used car lot in Pine River with this very unbalanced motor. After the salesman had driven the car around the block he said, "It seems to be missing on one cylinder." Frank explained to me how carefully he had said, "Yes, that's right, one piston is missing." Then Frank said to me, "But he didn't pay close attention to what I really said." The telephone call I had overheard came immediately after the salesman had learned what Frank had actually done.

That was the last time I saw Frank. When I returned to Longville that fall, the new butter-maker could tell me nothing about him. I often wondered how he and the used car salesman had resolved their differences.



The Big Fork Reconnaissance

In those early years, the Minnesota Forest Service was largely directed by one person, the State Forester, whose official title in the late 1920's was Commissioner of Forestry and Fire Prevention. Since it was a comparatively small organization, all planning came directly from the St. Paul office. This meant that many special programs were in progress before most of the field personnel were aware they were being planned. This was especially true of many "away from home" assignments that were normally made with little advance notice.

The work announced to take place in the Park Rapids district for the summer of 1928 led me to believe that there would be no special assignment for me. But I was mistaken, and sometime after the middle of June a letter arrived stating that I was to be assigned to a reconnaissance crew for the balance of the summer. The project was to start on July 5th, and the camp would be on the Big Fork River some thirty miles north of Deer River.

Velna Wilkins and I had gone together during our last year of high school and this romance had continued to the point where we had planned a wedding for July 10th. This affair would need to be either postponed or moved to an earlier date. Fortunately it was to be only a family affair and was quite easily changed to the 25th of June.

As usual, the final letter of assignment was quite specific, "Take a bus to Deer River and wait at the bus depot for someone to pick you up." The depot was the Miller Hotel and like most hotels of that period, had a large lobby. When I entered the lobby I saw only one person there, sitting in the far corner reading a newspaper. I sat down in the opposite corner.

As I sat waiting, this man was all there was to command my attention. He wore woodsman's boots and I could see a filled packsack by his chair. I noticed particularly that his boots were not fully laced and the laces were dragging. Over the next forty years I was to learn that untied shoe laces were this man's trade mark. I soon ambled over, started a conversation, and learned that he too was waiting to be picked up and taken to the Big Fork camp. He was Ed Lawson, then the forest patrolman headquartered in the village of Tower.

Quite soon Mike Guthrie came to pick us up. Mike was driving a new 1 1/2 ton rated 1928 Chevrolet truck. It had just arrived in the district but was to be used that summer for transporting men and supplies for the reconnaissance camp. The three of us rode in the very narrow cab to the camp site.

We went by way of Highway 6 to the Big Fork River and then west for possibly two or three miles on a dirt road which generally followed the south river bank. When we stopped, we saw an old farm house on the opposite side of the river. The farm house was to be our camp headquarters, but there was no bridge over the river. Mike called and someone came out of the house and rowed a small wooden boat over to our side. The boat was so small that only two could ride in it at one time. All summer the boat was seldom on the side it was needed.



The reconnaissance crew.

When we arrived at the farm house, I was introduced to the other men, including Clarence Prout, who was the designated chief-of-party. This was a red-letter day for me; for the first time I met Lawson, Guthrie, and Prout. Each of them, in his own and different way, would play an important part in my early forestry training. And each in some way would be responsible for at least one of the promotions that would come to me. And most of all, each would become a close friend over a period of more than forty years.

We were the last of the crew to arrive. Lloyd Henrickson was already at work as the cook. A student by the name of Wing was the cook's helper and would also be the truck driver. Al Rehard and Ray McPheeters were there to locate land survey corners. Other crew members were Ray Stevens, Homer

Whiting, Harold Page, Ed Erickson, Fritz Meinke, Mel Gilpin (Gil), Al Reed and two students, Dierke and Grady, whose first names I do not recall. That evening there was a training session to acquaint everyone with the work ahead. There were a few of us who had been at either the Bena or the rock cut camp the previous winter. However, we were not excused from the training session.

The camp site, as I recall, was near the north boundary of township 149, range 25. The summer's work from this camp was to be mostly in township 150, range 25, which adjoined to the north. In that township the even numbered sections were state owned. The odd numbered sections, which had been a part of a railroad grant, were then owned by Backus and Brooks. This was a logging company which later would be known as the International Paper Company and still later as the Minnesota and Ontario Paper Company. At this writing it is a part of the Boise-Cascade complex.

Years later Mike told me about a find he and his working partner came upon that summer while working in township 150, range 25. On their compass line they came to an area where they walked for three-eighths of a mile through flowers in full bloom. These were the Minnesota state flower, the Showy Lady Slipper, sometimes referred to as the moccasin flower. Today it is a rarity to find even a few of these flowers growing in their natural habitat.

The old farmhouse was primarily for cooking and eating. One of the rooms was used by the draftsman (Erickson) who consolidated the field mapping. Prout and Hendrickson slept in another room. The crew members slept in tents and on the ground without benefit of springs and mattresses. To my knowledge, the only sleeping bags available in those days were eider-down filled and specifically designed for sleeping outside in below zero weather, so they were not suitable for summer use.



The moccasin flower.

The morning after the training session, Lawson, Meinke, Gilpin and I were told we were going to a side camp. We were probably selected because we were the only ones who had previously been on this type of work assignment. We were informed that several miles east of the village of Big Fork and directly north of Scenic State Park, there was a concentration of state owned lands. In that isolated area somewhere near the state land, we were to establish a camp site from which the four of us would work for the balance of the summer.

The plans for the side camp supplies had been well prepared, and before midday we were on our way. Prout was in the truck cab with the driver while the four of us were being jolted about in back while attempting to keep our supplies from falling out. There were two tents, a small cast iron cook stove, tin dishes and cooking utensils, a generous supply of cotton camp blankets, the groceries and a multitude of miscellaneous items including our individual packsacks.

Prout had been told of a trail into the general area of the state land that might be drivable. Because we did not have the benefit of today's aerial photos, we had difficulty finding the trail. When we located it, it was indeed a very poor trail and barely drivable. After lots more jolting around and even some walking, we arrived at the north end of Sandwich Lake. We were getting near to where we wanted to be.

Continuing on the trail for about a half mile, we came to a park-like area of large white and Norway pine trees. Here we found a small brook of clear running water. We decided that this was the place for our camp. The trees would provide shade from the summer sun, and the stream would be our water supply. The brook would also serve as refrigeration for our butter, the only item that would need cooling. We could swim at the lake and



The author and Clarence Prout

enjoy its sandy beach by taking a short walk. We set up camp in section 29, township 61, range 25.

Our larger canvas wall tent, 9 by 12 feet, was for sleeping and we set it up in the shade of the large pines. We were not provided the luxury of beds with mattresses so one of the crew proposed a substitute of balsam boughs. We went to a great deal of work to make the beds. We carried some of the boughs from as far as a half mile away, but the comfort that first night made all the effort seem worth while. But balsam boughs dry out very rapidly, and after only a few nights they became brittle and broke into pieces which poked us frequently. In less than a week the boughs were in a pile outside the tent. Not wishing to go through the bough cutting and carrying procedure again, we spent the balance of the summer at that camp with only a blanket on the ground beneath us.

We set up our small 7 by 9 foot tent in an open area. In it we kept the groceries, miscellaneous supplies and tools, as well as the dishes and cooking utensils. Since we always had bacon and sometimes ham, we felt fortunate we were never visited by a bear.

The cook stove was set up near the supply tent. Only two short pieces of stove pipe had been sent with us, and all summer we asked for just one more length of two feet which we never received. Because we were so near to and almost surrounded by the tall trees, there was usually a down draft of air, and when the fire was going there was nearly always smoke in someone's eyes. Fortunately we had thought to bring along a few boards and nails to construct a couple of benches, a table for eating and a small table near the stove for a work counter.

Our camp was not complete until we built the most primitive of outhouses. There was no more lumber available, so well away from our camp and our water supply, we selected two small trees standing about three feet apart. After making certain it was free of small limbs and knots, we nailed a small but strong pole "sitting high". Beneath this pole we dug a deep trench. This

was also to be the depository for tin cans, garbage and other refuse. A shovel was always there and we made certain a sanitary landfill was maintained.

We had a kerosene lantern which we never used. After supper and washing the dishes, we always hiked to the lake for a lengthy swim. By the time we were back in camp the sun was down, and the mosquitoes would drive us to bed. There was no effective mosquito repellent at that time, though we sometimes tried the expensive and ineffective oil of citronella. Before dawn the mosquitoes would find their way into the tent and this always prompted us to be early risers. After breakfast and the cleanup we never sat around waiting to go to work. The mosquitoes that had gotten us up early, drove us to work early. We were always in the woods long before 8 o'clock. The state received lots of service for its money from our crew that summer.

A working crew was two men, and each week we changed partners. In that way it never became boring. The first crew back to camp at the the end of the day started the evening meal. Everyone pitched in with the preparation of each of the meals as well as the cleanup. The only day there was much real cooking was the day the truck came and left fresh meat. Then we cooked steak or pork chops as well as potatoes and gravy. Otherwise our meat was bacon, ham, or what might come from a tin can. Gil had all of his teeth pulled just before he came to camp. In those days, weeks had to pass before they could be replaced. Poor Gil lived mostly on canned salmon that summer.

We usually carried only a sandwich for our noon lunch. If the main camp had been generous, we sometimes also carried a small can of tomatoes. A can of tomatoes was great for quenching one's thirst as well as satisfying hunger. We always hoped we would be near a cool running stream or even a lake at lunch time but seldom were. More often we were near a stagnant pond or deep in a swamp. We would lie down and try to get a drink by using our fingers as a crude strainer to keep back the

largest of the aquatic life. To make it still less appetizing, swamp water was generally a brownish color. The presence of life in the water was the only way we had to conclude it was reasonably safe to drink.

The most exciting visitor we had that summer arrived with Gil and Fritz when they came back from work one day. They had found an albino porcupine. It was completely white except for its pink eyes. They had come upon it at an abandoned logging camp where they also found a burlap bag which they used to carry the porcupine suspended from a pole. By using a variety of wood pieces we fashioned a pen with a top as well as sides. Even with a great deal of meaningless talk about getting the animal to a circus or a zoo, the novelty soon wore off and within a few days Porky was turned loose.

One night we were awakened by very high winds and a beating rain. We had had the foresight to dig a shallow trench at the outside edges of the tent so no water came inside. As we watched from the tent opening, we saw, with each lightning strike, the large trees swaying and branches breaking. We wondered if the tents were going to stay anchored but we had no place to run to, so we went back to bed. The strong winds continued to blow, and since our heads were directly on the ground, we could hear the smaller roots of the trees breaking as the wind bent the tree tops. It was not very comforting. The storm eventually ended and when daylight came, we could see that we had not lost a tree but that the ground was well strewn with broken branches.

Sometime late in August or early in September, we completed all the work near our tent camp and were moved to the Link Lake patrol station. The patrol cabin was only fourteen feet square but this is where the four of us slept, cooked and ate for nearly two weeks. The fact that we had real bunks to sleep in made us feel we were living in luxury. When we arrived at the Link Lake station, the blueberries were plentiful and already ripening in the adjacent jack pine forest. We ate fresh blueberries

nearly every day and on Sunday Ed announced he was going to bake a blueberry pie. Fritz, Gil and I left to pick the necessary blueberries. When we returned, Ed had found there was no shortening to make the crust. For no apparent reason the bacon grease had been saved in a coffee can so we prevailed upon Ed to use that as the shortening. When we saw the completed baked pie, we were certain Ed had fashioned a piece of tarred paper as a pie shell. But, believe it or not, it was as tender a piece of pie crust as I ever ate.



Lookout Towers

The first lookout towers of the Minnesota Forest Service were made by nailing short pieces of narrow lumber to the trunk of a tall tree. The tree needed to be free of limbs for the greater part of its height. A tree that was leaning slightly was preferred. At the very best this made a crude and unsafe ladder. When possible a tree standing alone on a high point of ground was chosen to allow better visibility in all directions.

This crude lookout was not a tower in the true sense but did serve a purpose. It would normally be used only to climb and take a quick look. Only a comparatively small smoke in the immediate vicinity was likely to be seen. Large fires would generally be known about or be seen without such a lookout.

An ingenious ranger improved on the single tree idea. He cut three, or sometimes four, tall trees which could be handled easily. Then he limbed them to make poles. He dug shallow holes a few feet apart, usually on a barren hill top. With some assistance he would get a pole in each of the holes and lean them so the tops were nearly together. When they were secured, he



An early wooden tower.

had a tripod. On one side of this tripod he attached an improvised ladder, usually made of small tree trunks. This tower was much easier to climb and the slant of the ladder made it safer than the single tree type. Still another talented ranger fashioned a make-shift platform near the top. It was then possible for him to stand for many minutes at a time to detect any smoke.

The first steel lookout towers were erected prior to World War I. They were the same structures which had been manufactured for use as windmills. Instead of the windmill equipment at the top, these towers were fitted with round steel stock watering tanks converted to become the first tower cabs. A small hole cut in the bottom allowed entry. Most of these first tower structures were forty feet high and had four legs. There were a few fifty feet tall and a few with only three legs. The first cabs were referred to as crow's nests, and this name carried over to the glass cabs.

The first cab, or converted stock tank, was about six feet in diameter with sides about three feet high. On some a cone shaped roof was supported by four angle iron posts bolted to the side of the cab. This roof was of some help in keeping out the sun but, of course, was of no value in the cold weather of early spring and late fall.

As the tower system expanded, the original forty-foot towers were often used as trial towers. If the selected location proved satisfactory, a more modern tower was erected. It was probably the 1940's before reliable altimeters became available so the highest point of ground could be more accurately selected. I recall one forty-foot tower that was erected and used in three different locations as a trial tower.

The first tower at Wolf Lake, which was a forty foot steel structure with three legs, had once been at another location. Dana Worrall and I put it together horizontally on the ground. With the use of ropes and a truck we carefully pulled it to a standing position. We leveled it as best we could before digging a hole for the angle iron anchor for one of the legs. After this was securely fastened, we proceeded with the other two. My recollection is that the completed job bore some resemblance to the leaning tower of Pisa.

Following World War I the first lookout towers with enclosed cabs were erected. They were manufactured by the Aeromotor Company and were eighty-one feet high. I asked many times about the unusual height of eighty-one feet but was never able to obtain a satisfactory answer. These towers had the same galvanized wire (about 16 gauge) diagonal bracing as the windmill towers. In fact angle iron bracing was not used until after 1930. They were equipped with a ladder and had a hexagon shaped glazed cab. Many of this type are still standing on their original sites after more than fifty years. In the late 1920's the number of towers were increasing faster than ever before and a tower detection network was being realized.

The erection of steel lookout towers came to be another activity which was carried out by regular Forest Service personnel. Bob Mayberry was one of those who worked on early tower construction. Many stories were told about how daring Bob was and the chances he took. There was a story circulated that one day Grover Conzet went to a place where Bob was constructing a tower. After watching Bob a short time Conzet said, "Some day the Good Lord is going to be watching someone else and let you fall." Harold Schuppel was another tower construction man. He started just after Bob and nearly everyone who worked at tower construction for the Minnesota Forest Service worked with Harold at some time.

Those who thought they could climb and put the steel of a lookout tower together far above the ground soon got a chance. There were some who thought they could but soon found that twenty feet above the ground was their limit. There were some who said, "I can work as high as anyone as long as I keep one foot on the ground." Most shook their heads and said firmly, "Not me."

In the late 1920's and early 1930's there were several men who developed as experts at working topside. It was essential that a person thoroughly trust his working partner when working from twenty feet to as much as 100 feet in the air. One better have trust when he was up there with one leg wrapped around a tower leg and with both hands trying to swing a heavy piece of steel into his partner's hands at the opposite corner. Some of the men with whom I felt absolutely comfortable when working the "high side" were Dana Worrall, Art Ward, Harold Schuppel and Scoop Szusitzky.

To my knowledge there was never a Forest Service employee injured while on tower construction; knuckles were torn, fingernails broken, and shins badly bruised, but no one was ever seriously injured. I am sure there were many close calls as it was dangerous work. When we were constructing the Glen tower, a lining-up punch slipped out of my hand from

about ninety feet. A lining-up punch was a 5/8 inch steel rod fifteen inches long with a long tapered point. It was used to line up the holes in two separate pieces of steel and hold them in place while a bolt was put through an adjoining hole and tightened. The punch fell free until it hit a girder about fifteen feet from the ground. It glanced off the girder and went through an empty pump tank twenty feet away without hitting anyone. Ground crew members were well aware that there might be a falling object at any time.

A good ground crew was essential in the construction of a tower. They needed to read the blueprint accurately so the proper piece of steel was sent up when needed. A wrong part sent up meant much wasted time while it was let down and the right piece sent up. They also needed to send up the proper size and length bolts as required, and occasionally to return a dropped tool. Everything was pulled up by hand powered rope and pulley. The top crew (usually only two) would move the pulley to the proper location as the construction proceeded so the next part arrived where it was to be used. Usually a ground crew was three men but two experienced men would do as well.

I recall that Tom Lalone was one person who always kept one foot on the ground. He was a member of the ground crew when we built the Coleraine tower and was always scared. While we were building the tower, Tom had a dream he was working topside and had fallen. He got hold of some of the ornamental iron at the head of his bed, and his wife said he bent it out of shape and ruined the bed.

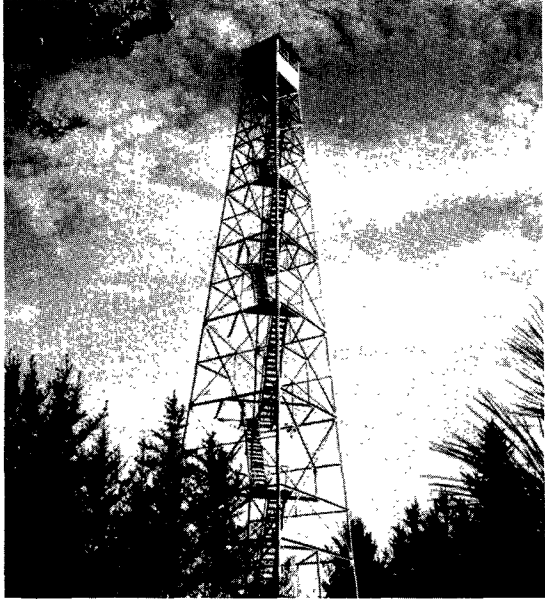
My involvement in tower construction began early in 1928. During that year, the Park Rapids district erected new lookout towers at Thorpe, Longville, and Birch Lake. Dana, Scoop, and I worked the top on all those, but it was seldom that all three of us were on a job at the same time. Later, sometime in October, Scoop and I were delegated to erect two towers in the Brainerd district.

The first of these was to be erected at Spider Lake west of Pine River. Two men from the Brainerd district were assigned as a ground crew. These men were local and drove home nights. Scoop and I were supplied with a tent and blankets and slept on the ground. The below freezing nights did not make this arrangement comfortable. We had not been furnished with a stove for cooking so what food was prepared was heated over an open camp fire.

Since Scoop and I had erected towers similar to or exactly like this one, we had memorized many of the part numbers. Before beginning construction we laid out the parts on the ground in the order in which they would be used. Also as we worked on the tower we were able to identify, from the air, most parts by their size and shape. All this made it much easier for the ground crew. There was little delay in their finding the next piece needed and having it pulled up so we could immediately use it. We did not complete the final tightening of the bolts until all the steel was up. It was a little shaky working that way but much easier to get the various parts to fit together. Things went well even with the untrained ground crew members, and we were successful in putting together all the steel for the eighty-one foot ladder tower in just ten working hours. However this did not include the erection of the cab.

When we completed the Spider Lake tower we went to Brainerd to construct another tower. There we slept in the bunkroom in an old warehouse and ate in restaurants. The tower was erected at Ahrens Hill, just north of Brainerd. It was a stairway tower and our first experience with this type. It was not as tall as other towers, a little more complicated but the procedure was the same. Prior to the CCC program the Minnesota Forest Service erected very few stairway towers.

I do not recall how much time we spent erecting this tower but I do know it took many days. I also remember that many of those days were cold. The last day we worked very late to complete the tower and then drove to Park Rapids. We arrived



A stairway tower.

just before the polls closed, in time to vote in the general election. That must have been the first Tuesday after the first Monday in November, 1928.

Probably the most unusual and most frustrating tower project was carried out by Dana Worrall and Art Ward. The early leaders of the Minnesota Forest Service believed that anything cheap was good, and anything free was even better. This particular tower job was started because of a supposed bargain.

A power company, possibly Northern States, was abandoning a heavy duty transmission line across the Mississippi River near Fort Snelling. Their leftovers included a 100 foot steel tower which had carried the huge wires over the river. Conzet learned that the power company wished to dispose

of it and sent George Gaylord to make the best deal possible. George completed the transaction for \$15.00 with the provision that the Minnesota Forest Service dismantle and remove the tower. Dana Worrall was assigned to do this and selected Art Ward to assist him. Their detailed stories about the problems they encountered and how they resolved them would fill a book.

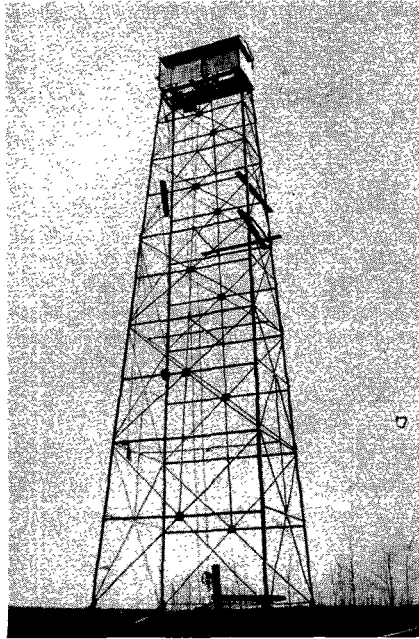
While they worked at dismantling the structure, they stayed at a combination apartment and rooming house near downtown St. Paul. Their stay was filled with mysterious events, and they later learned it the headquarters for the Karpas gang, well-known outlaws and gangsters of that period.

One night their 200 foot, 5/8 inch rope was stolen from the tower site. It was an essential part of their operations since it was needed to lower the dismantled pieces. It had to be recovered. They turned detectives and eventually located it on an island in the Mississippi River. The services of the Fort Snelling Military Police were enlisted to recover the rope from the thieves.

On the tower, the cross girders were so far apart they could not be reached by standing on the next girder below. With one leg wrapped around a tower leg, Art would assist Dana onto his shoulders. From this sitting position Dana could reach the bolts to be loosened and removed. To further complicate matters, the tower had been painted which meant it took a great deal of effort to break the nuts loose.

Late fall arrived when they were in the last stages of dismantling. Each morning they were standing on frost covered girders while handling cold steel. During the very last days there was even snow on the ground. Mules and drivers were borrowed from the Army at Fort Snelling to skid the long pieces to where they could be loaded onto a truck. The mules were most cantankerous, and Art and Dana were glad they were not the drivers.

The job was only partially over when they got the tower down. Since they knew exactly how the tower was taken apart,



The Nickerson Monstrosity

they were delegated to re-erect it at Nickerson the following spring. Not only were they asked to reconstruct it, but were asked to convert it into a lookout tower. They fabricated a sheet metal and glass cab on the ground, dismantled it, hoisted it to the top, and reassembled it there. The completed cab was 7 by 7 foot and the only lookout tower with a 7 by 8 foot front porch. Art told about the day a large piece of sheet metal for the cab was being pulled up in a light wind. Dana was at one of the corners, half wrapped around a tower leg. He had reached out and gotten a good hold on the sheet metal with both hands when a gust of wind caught it. Dana was nearly pulled off the tower before he could let go.

If a complete official record of expenses on this project was kept, no one ever learned of it. For their personal satisfaction, Dana and Art totaled their expenses and time (at an extremely

low wage). To this they added other state costs which they were sure of. They found that this total exceeded the cost of a new 100-foot lookout tower, and the normal erection costs. That particular \$15.00 had not been well spent.



The Bridge

The bridge on the road leading to the Smoky Hills tower was privately owned and passed close by the owner's house. The land owner had suggested that since the bridge was old and needed replacing and the Forest Service was the prime user, they should rebuild it. Late in 1928 the decision was made to build a new bridge.

The old structure was not truly a bridge, but only a crude way to cross the Shell River. It had been made by placing two full length tree trunks across the river about four feet apart. Both ends of the tree trunks rested on the low river banks. The tree trunks had been covered with planking and there was a low earth fill at each end. Time and the weight of loads had caused the tree trunks to sag in the middle and there was evidence of rot.

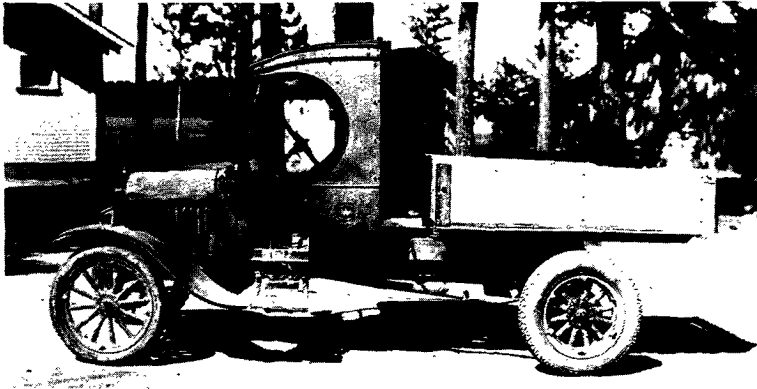
Either high water or an ice jam had, at some time, moved one end of the structure down stream a few feet. It undoubtedly had taken the pulling power of a tractor to return it to its original location. There was no question that it needed to be replaced.

About 300 feet north was the section line, the legal location for a public road, so that was where the new bridge was built.

First an earthen fill needed to be built on the low marshy shores of the river up to the level where the bridge would be constructed. It was possible to develop a sand pit only 200 feet away so that material for the earthen fill would not need to be moved far.

To carry the sand, a Model T Ford truck was borrowed from the Itasca Park ranger district. It had a Ruxtel rear end for added pulling power and a flat bed which would need to be rebuilt into an improvised dump truck. The fill material had to be loaded by hand, but we wanted to be able to dump and spread it with the truck. Dana Worrall and I decided that with a little ingenuity and no money at all, we would be able to do this at the Park Rapids ranger station where we were headquartered.

Our first effort was to rebuild the flat bed of the truck. To this we added a make-shift hinge at the rear end of the truck frame and a latch at the front end of the bed. The latch would hold the load while the truck was moving and, when tripped, would allow the load of sand to be spread. At least we thought it would work in that manner.



—Nadeau Photo, Minnesota Historical Society

The Model T truck.

The crew assigned to build this earthen fill was Elmer Kinninen, Vernon Pratt, Dana and me. Even though money seemed to be in short supply for many things, there generally was plenty for the groceries needed for a work camp. The camp was at the Smoky Hills cabin less than a mile away. As was customary we each took our turn at the cooking chores. It was in early November when we began the project.

When we shoveled in the first load, we put too much sand on the front end of our improvised dump truck. When we arrived at the spot where we wanted to spread the first load, we could not get the latch released. It took the four of us to eventually release the latch and since the truck was standing still, our load was all in one pile. We had to spread the load by hand in order to move the truck. The next time too much sand was put on the back of the bed, and the front wheels of the truck were lifted off the ground. Before many loads, we learned what needed to be done so that the sand could be correctly spread.

Late in November we completed the earth fill. Snow had not yet fallen, but the weather had become cold. Each night the ground would freeze in our sand pit but not enough to halt the work.

Allen Stone, who was now the district ranger, had arranged with the Hanna Mining company for the bridge timbers to be cut from their lands south of Smoky Hills. We were allowed to cut green standing tamarack trees but only what was actually needed for the bridge. Because of the numerous fall rains, there was lots of water in the tamarack swamp and this needed to be frozen before the timbers could be cut and moved to higher ground. There had been no snow and a great deal of cold weather so the swamp was well frozen in late December when Dana and I again set up camp at Smoky Hills to begin the necessary logging.

Powered chain saws were not yet available so we had only a two-man crosscut saw and a couple of sharp axes. We cut six pieces for the pilings and two pieces for piling caps. Each piece was twelve feet long and with a twelve inch top diameter. The

four bridge stringers were sixteen feet long and also had a twelve inch top diameter. This meant that each tree we cut needed to be very carefully selected.

A man who lived nearby and who had a team of horses, was hired to skid the timbers from the swamp to a point near the road. We had prepared a place where these skidded timbers would be rolled directly onto a trailer when we were ready to move them.

Before the time came to transport these timbers, Stone learned that the Itasca Park district had been assigned a new Model A Ford truck. Frank Pugh, the district ranger at Itasca, and Stone were good friends so Stone was able to borrow this truck. It was stipulated, however, that only someone with mechanical ability be allowed to drive the truck and this eliminated Dana and me. Stone had also managed to borrow a small trailer locally, so with Bill Mueller to drive the truck, we began hauling the bridge timbers.

All Model A Fords, both cars and trucks, had the gasoline tank built into the cowl. Thus the gasoline was fed to the motor by gravity. In general appearance, the nickel plated caps for both the gasoline tank and radiator seemed the same. It was only the vent hole for the air, necessary only in the gasoline cap but not readily visible, that made them different.

We began hauling the bridge timbers, but every few miles the truck motor would stop. Bill was certain there was something in the gasoline line so his solution was to disconnect the line at the carburetor and blow back toward the tank. Dana and I merely watched as each time this seemed to do the job. But these stops occurred regularly, and about the fourth time I happened to examine the cap on the gasoline tank but could not find the vent. There was a vent in the cap on radiator so I exchanged them. Bill had his head under the the hood and he did not see this take place. After that stop, the truck worked fine so Bill thought he had solved the problem. Dana and I decided not

to tell him what had actually taken place for fear he would have accused one of us of purposely switching the caps.

After the timbers were unloaded at the bridge site, Dana and I put a long tapered point on each piling with sharp axes, making certain it was in the center. This would be very important when the piling was to be placed.

Late in February 1929 the Shell River had frozen so the ice would support our weight while we put in the pilings. Because a pile driver was not available to us, another bit of cost free amateur engineering became necessary. Stone and Worrall had decided upon a way the pilings might be jetted in. For this purpose Dana had made two nozzles six feet in length from 3/4 inch galvanized pipe. They were patterned after a peat nozzle and had 5/8 inch tips. The district had a four cylinder Universal fire pumper with sufficient volume and pressure to supply two hose lines. This would be used with the two long nozzles to put the pilings in place.

The crew for this part of the project consisted of Stone, Worrall, Mueller, Scoop Szusitzky, Al Rehard and me. Scoop was a licensed land surveyor and had borrowed a transit from the county surveyor. He was certain that with the transit and his keen eye, he would be able to judge when each piling was positioned properly. The location for the first piling was determined and a hole cut through the ice. When a hole is cut through ice, water always floods out on top of the ice. This flooding partially obliterated the hole, and Scoop walked into it. He went down into the water to his arm-pits but quickly bobbed up. He was as wet as it was possible to get. We had come to Smoky Hills prepared to spend a few days so Scoop had extra clothing with him. Since it was below zero that morning, Scoop's clothing was frozen solid before we got him to the cabin and we had a hard time getting the frozen clothing off him.

The placing and jetting of the piling was a matter of timing and quick action. The first piling was set in the desired spot with the pointed end in the river bottom sand. Two men held it

upright and in place by using a timber carrier. When everything and everyone was in position, the pumper was started with Dana and I each holding a nozzle. As we kept the nozzles on opposite sides and even with the level of the pointed end of the piling, the gravel was washed away by the water pressure and the piling settled. When it reached the proper level as determined by the transit, the two men with the timber carrier held it at that point. After it was sighted in as being perpendicular from two directions, the nozzles were quickly withdrawn. Immediately the gravel settled around the piling and it was solidly in place.

The problems which were anticipated did not materialize, and the work of actually setting the first piling was over in a matter of less than five minutes. It was then we learned that the hardest work had been done by the two men holding the piling in place. Their greatest problem had been in keeping it from going deeper.

When the pumper was stopped, we didn't stand admiring our work. Because of the below zero weather the pumper had to be quickly drained and the hose pushed into the water through another hole in the river ice to keep it from freezing. With each successive piling jettied, it was the handling and coupling of the wet hose in sub-zero temperature that made the job most miserable.

We had expected to spend several days at this job, but it went so well we finished the following day. We were a happy and satisfied group, feeling we had rapidly completed a difficult and unusual task under adverse weather conditions. That was my last work in connection with the bridge, but when it was completed it stood for more than thirty years before it was replaced with a large steel culvert.



Rainbow Inn

Early in 1982 someone wrote a lengthy article for publication describing what he thought was a revolutionary idea. He proposed to design a condominium type of complex where two families might live and share most of the facilities. I wanted to respond to tell him that such sharing would not be entirely new and to relate an experience of more than a half century earlier. The difference was that my experience was not in a building specifically designed for communal living.

Dana and Gladys Worrall were married in the same year as Velna and I, and had lived in Dorset that summer. Since I was sent on a reconnaissance project immediately after we were married, Velna continued to work and to live with her parents. When I returned from my summer assignment in early September, we went directly to my patrol district station in Longville. We lived in the very small state cabin at the lookout tower until the fall fire season ended. It was not until I was directed to make my headquarters at Park Rapids again that we gave thought to where we would live. Dana's headquarters were

also to be in Park Rapids, so they also were looking for a place for the winter.

In those early years there were few small northern Minnesota towns with apartment buildings. The few so-called apartments were generally upstairs in a business building or were part of what was a large residence. These were usually occupied by the owners or their close relatives. Available rentals usually lacked the modern facilities of electricity and indoor plumbing. Both of us were experiencing difficulty in our search for suitable winter housing.

At the conclusion of World War I, Allen Stone, our district ranger, had taken over his father's hospital and converted it into a hotel. Because Allen's brother had served in the famous Rainbow Division, the Stone hotel was given the name Rainbow Inn. The late 1920's were far from prosperous for the Inn, and by 1929 the Stones had decided to convert the hotel into apartments. Very little remodeling was carried out on the first and second floors, and nothing was done to the third floor. We came along just as Stone was trying to decide what to do with the third floor. He was very much aware of our lack of furniture and our low wages of \$90.00 a month. He made us a proposition. He suggested that both couples rent the entire third floor without alterations and utilize what furniture remained from the hotel days. Each couple would have a bedroom and a room to convert into a makeshift kitchen. None of the rooms had a connecting door; each could be entered only from the hall. At the head of the open stairway was a small area we could use jointly as a living room. At the opposite end of the hallway was a bathroom to be shared. We agreed to take it.

There was no formal lease, but we did agree to remain and pay rent through the following March. The rent of \$25.00 a month included heat, water, and electricity. Electricity was a minor item as the only electrical appliance either of us had was a toaster. The Worralls took the south facing rooms, and we took

those on the north side of the hallway. We both moved in on November 1st.

Our bedroom was furnished with a dresser and an iron bed with a spring and mattress. As was normal for hotel rooms, even though they were converted hospital rooms, there was no clothes closet.

Our kitchen furniture consisted of a small table and four chairs. The small kerosene burning range did have an oven, but when the range was in use there was always the odor of kerosene fumes. A single light bulb hung from the center of the ceiling. Since there were no electrical outlets, it was necessary to have an extension cord strung from the ceiling light to the toaster.

Since the kitchen area was just another hotel room, there were no cupboards. We made some out of wooden orange crates and apple boxes which the grocer saved for us. The colorful curtains we made for the fronts of those boxes prevented visitors from knowing how few dishes and cooking utensils we had.

I cannot recall that we knew any young couple who had an electric refrigerator, but a few well established older people had them. Ice boxes, the kind the iceman came and filled each week, were common. Since we didn't even have one of those, the space between the kitchen window and the storm window was our refrigerator. On warm or sunny days we felt fortunate to have the north facing rooms.

Our common-use living room was very, very small and barely accommodated a library table, a wicker settee, and two wicker chairs. In December we managed, however, to squeeze in a small Christmas tree. The only light in this room, like the others, was a single electric bulb hanging from the center of the ceiling.

The thought of having the convenience of a telephone never entered our minds. If we did receive a telephone call, one of the Stone children would come and tell us. If it was necessary to call someone, we were always welcome to use the Stone's

telephone. This only required going down and back up two flights of stairs.

The rent included the privilege of washing clothes in the basement. We had no washing machine but did have two round wash tubs, a bench for them, and a scrub board. Those items were pretty much standard for newlyweds.

Clothes dryers were yet to be invented. We used outside lines. Since the lines were used by all the building's occupants, wash days needed to be well coordinated. Often the wet clothes froze immediately after they were hung outside. After a few hours of hanging outside the clothes were carried upstairs like cordwood and draped over the furniture where they eventually thawed and dried.

There were no garages so our cars stood outside. When it was very cold, and it seemed as if it usually was, we were fortunate to get even one of the cars started in the early morning. Dana had a Model T Ford which we always tried to start first. We would jack up a rear wheel and help the starter with vigorous hand cranking while the car was in high gear. It would usually start.

If two cars were needed on a particular day, it was usually a case of towing mine, in gear, to get it started. We would not be alone on a cold morning as there would be several cars being towed up and down the street. It was normal to see the rear wheels sliding until there was an area of gravel, free of ice and snow. When the sliding wheels hit the bare roadway the wheels would turn and then, if one was fortunate, the motor of the towed car would start.

Bill, a fellow who lived on the second floor, did not believe in having his car towed to get it started. He felt it was bad for the transmission and preferred to use the flame of a blow-torch to warm the manifold. Each cold morning would find Bill holding the torch but seldom did his car start. I am certain that he used more gasoline in the blow-torch that winter that he burned in his car.

The Rainbow Inn was about ten blocks from the nearest grocery store, but this presented no shopping problem. Nearly every grocery had a daily delivery service at no charge. We shopped about once a week. All the gals had to do was to walk down the two flights of stairs and use the Stone's telephone to call in an order. That afternoon the groceries were delivered to the third floor. There was no tipping as that was as yet unheard of in small towns.

It was an accepted practice for each family to have a charge account at their favorite grocery and pay it in full at the end of each month. There were few times when our grocery bill for the month was more than \$10.00. A small salary, even without deductions for income tax and social security, dictated great care in using any charge account. The thought of spending money to go out to eat never crossed our minds.

Radios were considered a luxury and very few people had them. The four of us played a lot of cribbage for entertainment. Each Saturday night there was a dance for the Rainbow Inn renters in Stone's dining room; the music came from a windup phonograph. We thoroughly enjoyed providing our own entertainment and didn't realize there was any other kind of world.



Timber Marking

In December 1928 I received a letter stating I was being assigned to timber reconnaissance in Cook County. I learned later that I would really be participating in an activity that was new to me and new even to the Minnesota Forest Service.

Each assignment was taking me to a new place, and I was seeing more and more of the state. This letter directed me to take a bus to Cloquet on January 2, 1929. District Ranger Percy Vibert would tell me how to get to Cascade Junction. This was a remote place only sixteen miles from the Canadian border where a logging camp was located. Vibert informed me that I should be at the Duluth and Northeastern Railroad depot not later than 7 A.M. the following morning. I was to ride in the caboose of a logging train which was going to Cascade Junction.

At that time most Minnesota Forest Service employees were issued annual permits to ride freight trains and operate railroad speeders on designated railroads. I had such permits for the Great Northern and Northern Pacific Railroads, both of which operated lines in the Park Rapids district. Ranger Vibert had



A railroad speeder.

arranged for me to pick up my freight train permit at the depot so I could ride on the Duluth and Northeastern Railroad. These permits stated that they were valid only in association with Minnesota Forest Service related work.

For fear of being left behind, I was at the depot before 7 A.M. In fact I was there long before that time, and the train was very late in starting the long trip. At the depot I met Ingvald Kjera, who was from the Bemidji district and also going to Cascade Junction.

Sometime in the afternoon we arrived at a small camp operated by the General Logging Company. We were at Cascade Junction. In addition to the usual camp buildings, there was a crude and definitely temporary railroad round house for the locomotives. The camp had been built primarily to serve a number of logging train crews and their operations. It was also where the reconnaissance men of the Forest Service crew would eat their meals.

From this camp there were a number of railroad spur lines spreading east and north. Some of these spur lines were very



A logging camp.

temporary and often referred to as skeleton tracks. In many instances they were little more than rails spiked to railroad ties lying directly on the uneven ground.

To the east of the camp and nearly a quarter mile away, was a United States Forest Service ranger station where we were to report and would sleep. A man named Bean was the U.S. forest ranger stationed there. Harold Ostergaard, who had been designated the chief-of-party, as well as crew members Clarence Prout, Ed Lawson, Don Cesar, Arnold Erickson, and Arthur Anderson were already there.

After spending one night at Cascade Junction, Clarence Prout informed me that I would be going with him on a timber marking project. (I talked with Clarence two weeks before his death in 1982, and he said that this was the first state land timber marking undertaken by the Minnesota Forest Service).

The state auditor administered state owned lands at that time. An auction sale had already been conducted and the state owned

pine in section 36, township 63, range 2, west of the 4th principle meridian, had been purchased by the General Logging Company. We were to select and mark the white pine trees which were to be left standing as seed trees.

It was expected that legislation would soon be enacted which would give the Minnesota Forest Service jurisdiction over state forest lands. In anticipation of this, Grover Conzet, the State Forester, had obtained permission from the state auditor to mark seed trees on this section of land. The logging operation would stir up the needle litter and expose mineral soil. This would provide a more suitable place for the wind scattered seed from the marked pine trees to germinate. The section (640 acres) of timber land to be marked contained mostly over-mature white pine. Many of the trees were fire scarred as well as hollow due to old age, which made it difficult to find suitable seed trees. A good seed tree needed to be sound as well as vigorous and have a well balance top capable of producing a crop of cones. Clarence made the final judgment in the selection of the trees. My primary responsibilities were to maintain an accurate compass line, keep a record of where we were at all times by counting my paces, and locate each marked tree on a map.

Arrangements had been made for Clarence and me to stay at Agnew and Donaldson's Camp Number Two. The camp's logging activities that winter were on General Logging Company and Superior National Forest lands. The camp was located on the General Logging Company's railroad about ten miles east of Cascade Junction and on the north shore of Two Island Lake. It was a 200 man logging camp and since all the logs were hauled by sleighs to the railroad, there were lots of horses. Donaldson, one of the logging partners, was in direct charge of this camp and its operations. He, the camp clerk, Clarence, and I slept in the camp office. Each evening we had a few games of four-handed cribbage with frequent interruptions. Lumberjacks would come for tobacco, socks or mittens which the camp clerk would need to record and later charge against their time slips.



Loading a sleigh of logs.

The most popular smoking tobacco at that time seemed to be the LaTurka brand.

We had been in camp only about a week when a lumberjack became terrifically sick during the night. He became so sick that he was wrapped in blankets and taken fifty miles to the Two Harbors hospital on a railroad speeder. A few nights later two more lumberjacks became just as sick and were taken to the Two Harbors hospital in the same manner. The doctors had not fully determined what the problem was with the first man but suspected spinal meningitis. As was common practice in those early years, the camp was placed under quarantine and signs placed on every building. No one was permitted to leave the general area while the camp was quarantined. The signs did not change our habits; we still worked every day. It was two weeks before the quarantine was lifted and the signs came down. It was

never determined what the problem really was but our wives had two weeks of concern.

The section of land where we were marking the timber was about three miles from camp. For most of the way we followed the main logging road which required going up a hill. All the logs coming to camp for loading at the railroad had to be sleigh-hauled down that hill. The sleigh road, including the hill, had machine made iced ruts, five inches deep, for the sleigh runners to move in. On the hill it was necessary to place bunches of hay in the ruts to prevent the sleighs from moving too fast. The correct amounts of hay had to be placed in the ruts in the right places, so the four horse teams would need to do some pulling to move the load down the hill. Too little hay would allow the loaded sleighs to move too fast and overrun the horses. This operation was often referred to as "haying the hill" and the man responsible for maintaining it properly was the "road monkey".

Each morning, when Clarence and I were on our way to work, Ed, the road monkey, would already be working on the hill. If there had been a frost or it had snowed during the night, Ed would be removing the hay from the ruts. After shaking out all the frost or snow, he would put the bunches of hay back in the right places. Some mornings, even though there had been no frost or snow, Ed would be merely rearranging the handfuls of hay, making certain that everything would be just right for that first sleigh load of logs. We would always stop and talk with Ed for a few minutes and watch him work. He took great pride in what he did, and today he would be considered a specialist.

Each morning as we worked, we gathered curls of bark found on standing birch trees. They were valuable as kindling when we started a fire at lunch time. Before the noon hour we would have located a place sheltered from the cold northwest wind and where there was a fallen pine tree. A fallen tree would easily be seen since some of the branches would stick out above the snow.

Using a showshoe as a shovel, we would sometimes dig away up to three feet of snow to reach the fallen tree trunk. The tree trunk became a place to sit and the cleared area beside it was where we built a fire. The dry limbs of the fallen tree would become the fuel.

After a fire was built, a small pole was pushed into the snowbank with the small end of the pole directly over the fire. On this we hung a two quart lard pail and put handful after handful of snow into it to melt and become the water for our tea. There was a heavy population of cotton-tail rabbits that winter, and it was impossible to melt that much snow and not have rabbit droppings in the water. When the tea seemed unusually strong, one would accuse the other of having failed to remove them.

Using a forked stick we would hold our frozen sandwiches over the fire. They were always well blackened on the outside and still frozen on the inside. The hot tea was definitely an aid in the digestion of those frozen sandwiches. We did not carry cups but drank our tea directly from the lard pail. Most of the time we drank from opposite sides of the pail.

When the smoke from our fire reached the tree tops, we would hear the calls of the Canada Jays from a quarter of a mile away. In a matter of minutes, a half dozen or more of them would perch on the branches above us waiting for a handout. Because of their habit of frequenting winter woods campfires, they had been given the nickname of lumberjacks.

When Clarence packed his lunch, he always wrapped yards of common string around the outside of the package. While we ate, we would be entertained. Clarence would tie a piece of meat to one end of the string and throw it a few yards away. A jay would swoop down and get it but as he flew away Clarence would jerk the meat from him. Gradually the jays would be induced to come just beyond arm's length. Clarence tried all winter to get his hands on a Canada Jay but was never successful. Before we put out our fire and went back to work,

the jays would have all that we had brought for them and part of our lunch also.

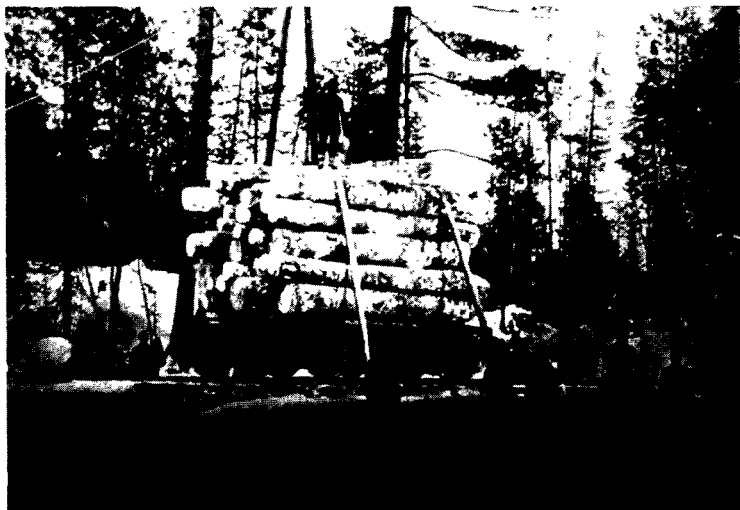
The logging camp was our home for a period of five weeks before we completed the timber marking job. We would never know if the leaving of the seed trees on those lands for the generation of another crop of the white pine would succeed. In August of that same year a severe forest fire completely destroyed the standing timber on those 640 acres before logging operations were even started.

The day we finished our work, Clarence received a message for him to return immediately to St. Paul. We packed our packsacks after we ate and hiked to Cascade Junction that evening. There we learned that the reconnaissance crew, with the exception of Lawson, had left that day. Ed had stayed to map two forties of state land which had not been completed. Clarence left that night on a logging train, and I remained to assist Ed.

The following morning was bitterly cold with a strong northwest wind blowing. Since any well run logging camp never had a thermometer we could not find out how cold it really was. Men who knew how cold it actually was might be reluctant to go to work. Even though this was before wind chill was talked about, we knew it was mighty cold. As we returned to the ranger station after breakfast, we agreed to wait another day before mapping those two forties.

Even though the following morning seemed to be just as cold and the same northwest wind was blowing, we decided we would try it. In the first two miles we made two stops because the tips of our noses and our cheeks became white, a definite sign of frost-bite. Each time after we located a sheltered spot, we built a fire and thawed the frosted spots. But we kept going and mapped the two forties before returning to camp.

When we went to eat that evening, a train crew was also eating. They were in the process of putting together a train of loaded log cars and planned to leave that night. They said they



A loaded railroad log car.



A train of log cars.

would inform us with a locomotive whistle signal when they were ready to go. We packed our packsacks and waited.

It was just before midnight when we heard the signal. Again we rode in the caboose. There was no place to lie down so we moved from the hard benches below to the hard seats in cupola and back again. It was pitch black outside the caboose, and the one swinging kerosene lantern inside gave off very little light. All night the train moved at a crawl and frequently stopped. These interruptions continued until daybreak. Then we could see ahead from the cupola of the caboose and we understood why we had been moving so slowly. Even at this slow speed the loaded log cars were swaying from side to side, and every few minutes it seemed as if a loaded car might tip off the tracks. The brakeman told us that somewhere along this part of the railroad a locomotive had tipped off the rails and sunk eighty feet into a peat swamp beside the track.

Neither Ed nor I had thought to bring any food, but a most generous brakeman gave each of us a sandwich for our breakfast. It was noon when we arrived at Hornby Junction. We had been on the General Logging Company's railroad line, and now we were on the Northeastern railroad line. The General Logging Company had a camp at Hornby Junction, and we joined the train crew for a quick meal of hot food. In a matter of minutes we were on our way, but now it was a smoother and faster ride. We arrived in Cloquet shortly after 4 P.M. It had taken sixteen hours to travel approximately 140 miles. I had often heard about the slow train through Arkansas and wondered how it might have compared with this train ride in Minnesota.



Hackensack

Joe Krake was an early forest patrolman in the Backus patrol district. Joe retired from the Minneapolis Fire Department and then worked a few more years for the Minnesota Forest Service. In March 1929, I was informed I would replace Joe as forest patrolman so my headquarters were changed to the Birch Lake tower, located about three miles north of Hackensack.

The lookout tower had been constructed during the previous summer and late fall by Dana Worrall, Scoop Szusitzky and me. A new residence cabin had also been started the previous year and although only partially completed during the winter months it was considered livable.

Velna and I moved to the station soon after the first of April. There was a very poor trail, uphill for most of the one mile from the highway. The ground was thawing so we had a difficult time getting to the top of the hill and to the cabin.

The three room building with a screened porch was little more than walls and roof set on a full basement. The studding for the partitions and ceiling joists were in place but not covered.

There were door openings between the rooms, but the doors were not there. The rough subflooring would not be covered with four inch fir flooring until much later. We would need to try to make it our home while it was being finished.

This building was much larger than any other Forest Service cabin I had seen. From a distance the log effect siding gave it the appearance of having been built of peeled logs. The basement had been built into the side of a hill with one end wall fully exposed. On this end were large hinged doors so the basement could be used as a garage as well as for storage. The standard New Maple brand wood heating stove provided enough warmth for the entire cabin.

In addition to myself, three other men had been assigned to the Birch Lake station for the spring season. All three were new forest service employees, and Velna was expected to cook for them. Jake Licke had been assigned as lookout towerman while Asher Hinds and Augie Lind were there for fire duty. All of them would also get other work assignments when they were available. The three of them slept on the screened porch. This number of men at a single station was unusual. I was told that they were expected to help with the completion of the cabin. In addition it was expected that they would make the one mile trail into a road - with hand tools.

That spring there were frequent and plentiful rains and few fires. On the rainy days we all worked on the interior of the cabin. First we nailed wooden lath on the ceiling joists and all the walls in preparation for plastering. Sacks of mortar for making plaster were piled in the basement, but I had been told there was no money for a plasterer so we needed to be concerned only with the lathing. As we nailed on the lath we talked about the difficulty of plastering. Augie said he watched a man plastering once and always felt he would be able to do it. This comment was reported to Stone and Augie was taken at his word.



The Birch Lake cabin.

Many an early employee found himself a specialist by merely saying a word. It was Augie's simple remark that he thought he could plaster which caused him to become involved in the activity. If Augie was willing to try it, Stone was willing to give him a chance. Stone told me that if it didn't seem to be working out I was to stop the project. We had little choice as it would be months before money might available to hire a professional plasterer.

On his own time and at his own expense, Augie made a trip to his home town of Nimrod. Not only was he able to borrow the necessary plastering tools from a friend but returned with valuable pointers as to how they should be used. A mortar mixing box had been borrowed locally and we were soon in business.

We fully expected there would be some problems getting the mortar mixed to the right consistency. The ceilings would be more difficult than the walls but we knew that they should be done first. From the very beginning Augie had difficulty getting the mortar-filled trowel from the hod and up to the ceiling. The first load slid off the trowel before it reached the ceiling. The next load didn't stick and fell full in Augie's face. Still more fell off and a great deal of it fell on Augie before it slid to the floor. But he never gave up and after a few hours he had the job reasonably mastered.

The mortar estimate had been set high so we had enough to finish the job. After the first day's work, we shoveled out nearly as much plaster from the floor as Augie had been able to put on the ceiling. Also, since a great amount of plaster had dropped on Augie and stuck there, we had to clean him up as well. Before the job was completed Augie became quite proficient, and consequently for the next few years, he became the Forest Service plasterer.

Under the very best of weather conditions, plaster requires days to dry completely. The rainy days usually meant high humidity and it seemed as if the plaster never would dry. Wet plaster has a most offensive odor and it was not pleasant living in the cabin during the weeks that this work was going on. Even though it was far from a pleasant situation, there was no complaining. The economy was not good and the times dictated our attitudes. Since we did have a job we accepted the circumstances. We were all aware that there were a number of people without work who would have gladly taken over under the existing conditions.

On clear days, when it was still not dry enough for fire weather, we worked at improving the road to the station. Like many Forest Service roads of that period, the road was built along the side of the hill. This was by far the easiest way of doing the job when using hand tools. The road material was moved with a shovel. Generally it was the simple process of



Building a side hill road.

moving the soil and rocks from the bank side to the opposite side of the road. The soil was either carried on a shovel or thrown. Sometimes, in order to fill a low spot, it needed to be moved farther than just across the roadway and this was accomplished with a wheelbarrow. Rubber tired wheelbarrows were unheard of and the steel wheels of the wheelbarrow we had sank deeply in the loose soil and made them extremely difficult to push. All of it was very hard work. There were times after a full day's work when the four of us would look back a distance of only a few yards and feel good about how much we had accomplished.

One day I had a complete change of activity and went to the Mauser Fur Farm on Webb Lake, a few miles east of the Birch Lake station. They had requested that I visit them to discuss how they might better protect their facilities and animals from woods fires and smoke. At this farm they specialized in the breeding of hybrid foxes. They had an elaborate setup covering many acres. All of the buildings were designed in Swiss Chalet style. I learned that day that Herman Goering, who was later Adolph

Hitler's deputy, was one of the principal stockholders and actually had visited and inspected the facility only months earlier.

One fire in my district that spring was on the west side of Ten Mile Lake. It was about 8 o'clock in the evening when the call came. A very excited voice said, "Someone was burning leaves and the fire is out of control. It is spreading rapidly and some summer cabins are going to be burned."

Our only transportation was my 1927 Chevrolet coupe. We placed the filled pumptanks and short handle shovels in the trunk. The person calling had made the situation sound extremely serious so Licke, Lind, Hinds and I crammed into the one seat and took off leaving Velna all alone. In our hurry we did not bother to even close the basement garage doors.

The fire was really not too difficult to control. About the time we had all the flames extinguished, it began to rain lightly. Until that time the cabin's owner had been concerned but they had been of little help in putting out the fire. With the light rain coming down and the flames gone, they were suddenly in a festive mood. Some of the ladies made sandwiches, others made coffee, and still others brought cake. We sat comfortably on an enclosed porch and their mood made us feel like heroes. We stayed and stayed.

Back at the Birch Lake cabin, shortly after dark, the coyotes had tuned up for the evening. They were in the hills a mile away but they sounded to Velna as if they were just beyond the kitchen door. She had never considered their howling a soothing sound as I did so she did not appreciate their mournful calls when she was alone. While the serenade of the coyotes was going on, she began to hear voices. Now there were two kinds of sounds bothering her. She believed the voices were coming from the basement but was not about to go down and investigate. Long before, she had securely locked the doors; now she put out the light and went to bed. It seemed still more quiet then and she could hear the voices intermittently. It had

been raining for more than an hour. She could not believe we were still working on the fire and wondered why we had not returned. She was still hearing the voices as we drove into the yard.

It was after midnight when we returned to our cabin. It was no longer threatening to rain so I didn't bother to put the car in the basement or to shut the door. In the cabin I found Velna nearly petrified with fear. She did not believe my suggestion that the voices were her imagination just because she had been alone. However I did manage to calm her down somewhat before I went to bed. Within a few minutes I too could hear voices. I listened intently, and sure enough they were coming from the basement.

I dressed quietly and armed only with a flashlight crept slowly down the inside stairway which led to the basement garage. When I was part way down I turned the light all around. Huddled in the back corner were three Indian boys, probably ten or twelve years old. They had walked the mile from the highway, and their only explanation for being there was to get out of the rain.

It was a warm night without rain so I didn't feel bad about shagging them out and sending them back to the highway. I put the car inside and locked the basement doors just in case they had any idea of returning. The following morning I became curious as to how far they might have gone. It was easy to follow their damp footprints in our new roadway. At a large culvert under the highway there was evidence that someone had spent the night so I assumed it had been the Indian boys. At least they had been able to spend the night where it was dry so I had no regrets for what I had done.



Land Economic Survey

A land economic survey of one of Minnesota's cutover northern counties was funded by the 1929 state legislature. The Minnesota Forest Service, with the cooperation of the University of Minnesota's Department of Agriculture, was directed to select a county. The heyday of the logging industry was considered past and the survey was to provide an answer to the question of what to do with those lands which once had grown such a bountiful crop of timber.

Since money allocated for the project was very meager, Hubbard County was selected for the survey. Hubbard County had a wide variety of soils as well as timber, and was one of the smaller counties which had been logged over. The field work was begun in 1929, but most of it was completed the following year. Because of the availability of land records, Park Rapids was selected as the project headquarters. Ray Stevens was designated chief-of-party. Even though the full compliment of crew members that first year must have totaled between fifteen and twenty men, the only names I now recall are Ed Lawson,

Pat Cline, Scoop Szusitzky, Jake Licke and Lloyd Hendrickson, the cook.

My assignment to the crew was as a reserve or emergency member. It was intended I would work on regular Forest Service activities out of the Park Rapids district office and would be called upon only when a regular crew member was unable to be on the job. During the first couple of weeks when I reported for work each morning at the ranger station, I was usually told to go to the land economic survey headquarters. Someone was sick or for some other reason was unable to work each day. It was soon realized that with such a large crew there would always be a need for me so I became a part of the crew, filling in where needed.

There were three separate work activities connected with the project, with crew members specifically assigned to each activity. The functions were forest mapping, soils surveying, and traverse mapping. Those assigned as forest mappers were either regular Forest Service employees or University of Minnesota School of Forestry students. The crew members for soils surveying were nearly all students majoring in soils. Scoop Szusitzky, whose background was land surveying, was assigned to traverse mapping, with Jake Licke as his regular assistant.

Three Model T Ford touring cars had been purchased for transportation. The work was planned so that three crews of two men would travel in each of two cars. The third car was fitted with a specially designed and calibrated odometer for traverse mapping. One or two crews were usually delivered to their work before the traverse crew went to their work.

A forest mapper and a soils man worked together as a two man crew. The forest mapper was designated to be the one to use the compass and maintain a correct direction of travel when the crew was in the field. Each man kept count of his own paces so as to map his work responsibilities. The forest mapper recorded changes in timber and ground cover. He also regularly

and systematically chose 1/4 acre plots (eight to each forty acres) and recorded the different tree species and size classes on each plot. All lands were covered by this system regardless of ownership.

The soils mapper closely observed the kinds of trees and other ground cover and, where they changed, looked for clues to the types of soils. When these changes became apparent, he made numerous soil borings, using a two inch earth auger. The soil samples enabled him to prepare a soils map as he proceeded. For both forest and soils mapping, every possibility had been anticipated and a symbol assigned for each. I am certain we needed all the symbols.

The traverse mappers used the specially equipped Model T Ford daily since normally they would be traversing some portion of a drivable road. I recall that it was most important that the wheel to which the special odometer was attached be well cared for. A specially designed tire gauge was used often on a day of temperature changes. When the tire pressure dropped as little as a half pound, a hand operated tire pump was brought into play. The readings taken from the graduated odometer, combined with the use of a plane table, made it possible to accurately map the route of roads and drivable trails.

Walking was the only way to travel and map abandoned railroad grades as well as roads and trails too rough to be driven. For these the plane table was used for mapping directions, and distances were obtained by the use of a surveyor's tape. The shore lines of all meandered bodies of water were traversed and mapped in this same manner. In the mapping of lakes, great care was taken to determine the probable location of the normal water line.

When I reported for work each morning, I seldom knew where I would be going, with whom I would be working, or what type of survey I would be doing that day. If I was to be a forest mapper, I only had to put the necessary work items in the canvas shoulder bag which held my sandwich. I seldom carried

water as nearly all lakes and streams were considered clean enough to drink. The items I would need were the field work sheets in a hinged aluminum holder called a tatum, a diameter tape to measure tree sizes, and a pocket compass. If I was to be on soils survey, I would need only the necessary work sheets and a two inch earth auger.

When I was directed to fill in as a traverse crew member, I worked with either Scoop or Jake. The first couple of times I was relegated to only holding one end of a surveyor's tape to measure distances. As I got more traverse assignments, I was eventually allowed to work the plane table and to drive the Model T Ford. By the time I was sent off to a different Forest Service project late in the summer, I had become fairly proficient at all field phases of the Hubbard County Land Economic Survey.

I spent one of my last days on the project working with Scoop traversing the shore of Fish Hook Lake. It was an abnormally cool day even for northern Minnesota. Late in the afternoon our traverse brought us to the stream which is the lake's only outlet. Scoop had previously done some land surveying in that general area and knew we were less than a half mile from a meander corner. A meander corner is a point that was established on the shore of a body of water when the section line of the survey crossed.

Scoop was a meticulous workman and wanted desperately to check our survey line into that corner to determine our mapping accuracy. The problem was that we were on the opposite side of this rather wide and fast moving stream. Scoop insisted that we needed to get to that particular meander corner, and I agreed we would try.

To begin, we needed to establish a point on the opposite stream bank by the use of the plane table and the measurement of distance. I was the one who needed to cross first. The most comfortable and dry way would have been to drive about ten miles and walk a half mile. Once the point was established, I

would need to return for Scoop and the balance of our equipment. This would take hours so we decided to do it the uncomfortable way.

The stream was only about fifty feet wide. From where we were standing on the bank, the water did not appear to be more than waist deep. I stripped down so I could carry my clothes across. The water was deeper than we had thought and went nearly up to my armpits. I was fortunate to stay on my feet and keep my clothes dry. Then I returned to get one end of the surveyor's tape and the surveyor's rod. On the second trip I had real problems as the fast moving water tugged at the tape and nearly pulled me under. After the point was established and the distance measured, Scoop stripped down and brought his clothes over. Then he returned to the opposite bank to get the plane table and other paraphernalia.

We continued the traverse to the meander corner and, as was generally the case, found that Scoop was right on the money. This meander corner would be our starting point the next day, but we would arrive there from a different direction. We were more than satisfied with our accomplishment but it was now past normal quitting time, and we still had to get back to the Model T. At the river we had to repeat the two trips each across and then walk another mile.

In 1982, I was back at that same crossing. There was still no bridge and there were more summer homes on both sides. Power boats were cruising up and down the river, and a fishing boat was anchored a short distance out in the lake. Scoop and I would not have been able to repeat our performance on that day.



Baudette

The year 1929 was the beginning of a prolonged drought for most parts of the Midwest and definitely in the forested portions of Minnesota. In the years to follow, and particularly through the year 1936 when the drought reached its peak, Minnesota would experience many severe fire problems.

In August of 1929 the fire situation in Lake of the Woods County became critical. Peat fires were occurring in such numbers that the Baudette district Forest Service personnel were unable to get to them for days after they started, so Forest Service personnel from other parts of the state were sent there to provide assistance. At Park Rapids, 150 miles from Baudette, the acrid smoke had been drifting in for days. The odor of this smoke was far different from that of burning wood or grass and completely strange to most people.

One morning I was notified by the St. Paul office to be ready to leave for Baudette the following morning. The duration of the assignment was very indefinite and would be totally dependent upon the continuance of fire weather. I had been working in the

Minnesota Forest Service for two years but had not seen a large fire or one burning in peat soil so this was to be still another new experience. But it did not come all at once. Rather, as we got closer to Baudette, I was to experience step by step what a peat fire can do.

Bill Mueller was to drive the Park Rapids district truck, a new Dodge, to Baudette where it was to be used on fire duty and I was to ride with him. We were told that the road conditions north of Red Lake were far from good. With this in mind we decided upon an early morning start to be certain of reaching Baudette in one day.

A large portion of the road north of Waskish, which is now State Highway #72, had been built on a drainage ditch dump and had a base largely of peat soil. A great deal of the swamp land in that part of the state had been criss-crossed with drainage ditches. The intent was to eventually convert the drained lands into usable agricultural areas. The material obtained in digging those ditches had been placed to one side and in some instances had been leveled to make a road surface. The depth of the peat varied considerably. Where the swamp was deep there was little or no mineral soil as a top for the roadway. The absence of sufficient mineral soil meant the road surface was often broken by time and traffic and some sizable holes resulted. This made travel very slow.

Soon after we passed through Waskish we entered rather dense smoke. The northwest wind was bringing in the peat smoke and its most offensive odor from Baudette, still miles away. There are few smells with an odor more permeating than peat smoke: We were not enjoying this preview of our work.

As we continued northward, occasionally there was a slight clearing in the smoke and we could see a few hundred feet to the side of the road. Sometimes we saw a small area of stagnant black spruce trees but mostly we saw tag alder, labrador tea, or marsh grass. We wondered how there could be so much dense smoke and still no sign of fire or burned land.

The road ran due north, jogged slightly to the west, then returned to its original direction. The jog in the road meant we had passed a land survey correction line. It was there we saw a large and interesting roadside sign which read, "You are now entering Lake of the Woods County. The land of potatoes and clover. Do not despair, Paradise is at the other end." This or a similar sign welcomed travelers on this road for many years.

As we continued, the smoke became more dense even though we still could see no evidence of fire. The odor of the smoke was becoming more and more pungent however. We were now seeing the fine peat ashes sifting around the closed doors of the truck cab. A few minutes more and we caught a glimpse of burned land through the dense smoke to the west of the road. There were no flames but we knew we were now in the fire area.

Within a mile we came to a crew of a half dozen fire fighters. They were digging out burning peat spots from the road shoulders. Particles of burning peat carried by the wind were starting new fires in the tinder dry peat at the sides of the traveled part of the road. We stopped and talked with the crew and were told that their job was to prevent that section of the road from burning up. If the new spots of fire had not been shoveled out immediately, the road could have been destroyed in a matter of hours. The crew assured us that the road ahead was still drivable, but we were advised to drive slowly. The combination of dense smoke, blowing ashes, and the poor condition of the road made it impossible to do anything but proceed slowly.

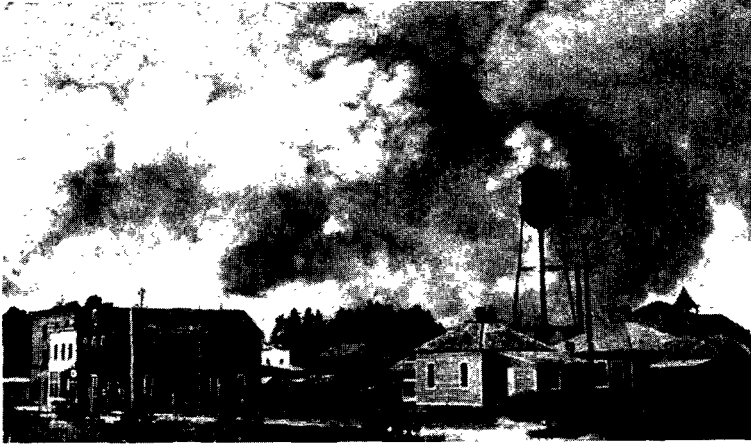
At one point the smoke cleared, and we could see the drainage ditch next to the road. It was completely filled with peat ashes which had drifted into it like snow. I later learned that the drainage ditch at that point was four feet deep and had been completely dry for weeks. Soon we passed still more men digging burning peat spots from the road but we didn't stop to talk with them.

After we crossed the Rapid River, we seemed to be in a different world: there was very little smoke and no ashes. We had quite abruptly come into a mineral soil farming area. Within a few miles we arrived at the two villages of Spooner and Baudette which were separated by the Baudette River. These two villages were consolidated years later as Baudette but not without much controversy. We were within a stone's throw of the Rainy River which separates the United States and Canada.

That evening in Baudette, patrolman-at-large John Virtue explained several things about the fire problems and why there was so much burning peat. The average annual precipitation in the northwestern portion of Minnesota is approximately twelve inches less than the extreme southeast corner, and that year it was even less.

The farmers of the area had learned during earlier droughts that when peat topsoil burned off, better farm land resulted. Now all fires were quickly burning deep in the peat and smoldering. Few, if any, gave thought as to how these fires might be controlled or extinguished. Statements were made that fires were being purposely set on state owned lands with the expectation they could be purchased later. The drought conditions were more serious than had been dealt with previously. Where only a few inches of peat had burned before, now a few feet were burning. Soon the rapidly spreading fires had covered many thousands of acres of peat lands. There was much concern that the situation already had become critical. Some long-time residents were commenting how closely conditions resembled those of October 1910 when both Baudette and Spooner were completely destroyed by fire and forty-two people lost their lives.

After spending one night in Baudette, Jim Gannaway, the Baudette district ranger, took me to the Faunce patrol station which was about twelve miles south of Williams. Jacobson was the newly appointed forest patrolman and Emil Elsner was the lookout towerman. Lloyd Conzet who arrived the next day was



Fire in the distance.

also to stay at Faunce. He was put in charge of a fire to the northwest near Winter Road Lake but was there only about two weeks before being called back to Brainerd because of critical fire conditions there. Many times I wished I could have joined him.

After leaving my packsack at the Faunce station, Jim drove me back towards Williams. When he dropped me off he said, "This is the northwest corner of your fire. It started about a week ago but we have no idea how large it is. So far as we know, no one is working on it, but there might be". He told me that I could hire men to work on the fire but was not to engage heavy equipment. Since there was no probability that water would be available, all suppression work would be done with number two shovels. As he drove away he said, "And don't let it get any bigger."

As I stood watching the dust he created, I was somewhat baffled. He had made no suggestion as to how that last order might be accomplished, but I vowed I was going to do my very best to carry it out. I had worked as Jim's crew partner on the

Bena reconnaissance and from that experience knew I could expect no favors from him. There was little time left in the day so I returned to the Faunce station and climbed the tower. The west boundary of the fire appeared to be less than a mile from the tower which was about as far as I could see through the dense smoke. I had been certain I could get some sort of an idea as to what the fire was like. However from Elsner, the towerman, I did get some information about the terrain and timber types but nothing about the fire. That evening I talked with forest patrolman Jacobson but learned nothing as he had been employed less than two weeks and knew nothing that could help me. I was on my own and I knew then I could only learn about the fire by walking around it.

The following morning I packed a lunch even though I fully expected I might be able to walk around the fire in a couple of hours. I was most grateful for that lunch before the day ended. As is normal and as I expected, the fire had a very irregular edge. Almost all the fire boundary was smoldering peat soil less than four inches in depth. The shallow peat was underlaid with sandy soil, and later I learned that the entire fire area had once been a part of ancient Lake Agassiz.

Every so often I came upon men working at the fire edge, usually near their homes, and on their own land. It was easy to see that they were only trying to keep the fire from spreading to their property. But at least they were doing something. In each case I informed them that as of that day they would be paid for their services. I gave each individual working alone a timebook in which to record his hours. Where there were several men working near each other or together, I selected one as time keeper for the group. In all cases I asked them to continue what they were doing but did not tell them I would be back later with more specific directions. I wanted to see all of the fire boundary first. Late that afternoon I was much farther from the Faunce station than I had expected to be and still had not gotten around the fire. The last group of men I came to told me about a short-

cut through the fire area back to Faunce. It was nearing sundown when I left the fire line and took the short-cut.

Early the following morning I returned to the point on the fire line I had left the evening before. As I continued to walk and examine the edge of the fire I recorded distances, angles, and directions as I had the day before. At the end of the second day I had a reasonably accurate map of the burned area. That evening I calculated from my records that the burned area was slightly in excess of 10,000 acres.

In the two days it had taken me to go around the fire area, I had given a great deal of thought to what the control strategy would need to be. It would need to be my own decision as I had received neither guidance nor encouragement. Jim's last words, "And don't let it get any larger," were still ringing in my ears. I was more determined than ever that the fire would be effectively controlled. Since I could hire no heavy equipment, the men I talked to on the fire line were my only resource. Because they were already there protecting their own interests, placing them on the payroll was a bonus to them even though the fire fighting pay was only 25 cents an hour. Now I had to convince them to leave their own property and work at that low wage where I needed them.

Having decided where the most hazardous spots requiring the first work were located, I started around the fire again on the third day. As I came to a man or group I asked to see the time book. I believe I stated that I needed the information for the district ranger. With the book in my hand I began to outline where I wanted each man to work and what I wanted him to do.

Their objections ranged from very mild to very emphatic. I expressed my understanding of their concern to protect their own property and carefully explained that to suppress the fire on their property would not necessarily safeguard their interests. Unless the fire was controlled in its entirety there would always be the possibility that a wind change would bring it upon them from a different direction. As I talked I began to believe I was

gaining their confidence. They felt, I seriously believed, the fire could be controlled while their interests were protected. They also understood that they would not be paid if I was not doing the directing. Thankfully it did not become necessary to explain to them that anyone who might refuse to fight the fire was subject to conscription. After each discussion when it became evident that the men would work where I wanted them to, I returned the time book.

Within a few days the men were fully convinced I was concerned about protecting their property. When the wind was blowing toward their homes, I saw to it that they worked closer to where they lived. On other days they worked farther from their homes. With their efforts we made a great deal of progress and gradually the fire was brought under control and actually extinguished in sizable sections.

About every five or six days Jim would bring more groceries to the Faunce station for Elsner who was the cook as well as the towerman. Jim always came in the evening and never did see any of the fire line. I had maintained a map of the fire and would inform him of what, why, and where certain things were being done. Jim never questioned the activities nor did he make suggestions. Each time after he left I could only assume things were going correctly.

This fire was a full time assignment. There were no rains and every day was a fire day. It was a seven day week and each day had long hours. The peat smoke constantly covered the entire countryside regardless of wind direction. Large peat fires were burning in Canada which added to the smoke problem. We worked, ate, and slept in peat smoke. It seemed as if the odor penetrated into every pore of my body. To make it still worse there were no facilities at Faunce for any kind of bathing. Long before I left there, I felt and smelled as if I were a walking peat fire.

After a few weeks of this it was only natural to want a better way of life. I began to express myself clearly and positively

about what I thought of that part of Minnesota. Everyone was aware of my most common statement, "If I ever get the chance, I can be ready to leave in five minutes." I kept hoping that I might be recalled to the Hackensack patrol district because of serious fire conditions there, but it never happened.

It was nearly five weeks before I informed Jim that I felt the fire was under control and could be left with a local fire foreman. I collected all the time books, and John Virtue came to take me to Baudette. I gave the time books to Jim. Without looking at them he handed them to the girl preparing checks and said, "Cut the hours in half and pay them only that much." I was stunned and hurt as I felt that I had left those local people with the feeling I had been totally honest with them. I often wondered what those people were told when they received checks for only half of what they knew was due them.

Because I was now in Baudette, I arranged for my wife to drive up for a weekend. After more than five full weeks of fire duty I felt it would be arranged for me to have a couple of days off the fire line. But it was determined that the fire situation was still severe so I was given only one day.

When my wife arrived back in Park Rapids, she learned that my father had been granted an appointment to see doctors at the University of Minnesota. She sent me a telegram stating that the appointment was for the following Wednesday and that he wanted me to take him to Minneapolis. I was then at the Rapid River patrol station, working with Jim Angell on another fire. Jim was the one who took me to Blackduck that evening so I could meet a train and get home. It was later that I learned that Gannaway was certain I had arranged the telegram in order that I might get out of the Baudette district. I have no way of knowing how long it was before Jim learned that my father lived only two weeks after exploratory surgery which revealed he had advanced stomach cancer.

While in Minneapolis with my father, I made my first trip to the St. Paul Forest Service office. It was then in the old state

capitol in downtown St. Paul. State Forester Grover Conzet informed me that Gannaway had already asked that I be returned to Baudette. In my own mind I was certain that it was not because he considered my services so valuable.

I had gone to the St. Paul office to talk to Conzet about the numerous special assignments I had been given. In slightly more than two years I had been away from home on two reconnaissance assignments of more than two months each, a timber marking project of six weeks, a month on lookout tower construction, and for the past six weeks had been on a project fire. I had come to feel that I had been given more than my fair share of such assignments. I knew several patrolmen who had been living comfortably at home while I had literally been living out of a packsack.

Conzet explained to me that I was gaining experience which would benefit me and better prepare me for future advancements. He also spoke of the advantages of working with employees from other parts of the state, as well as working under the direction of other rangers. It was years later that I fully realized how greatly these assignments had benefited me, and the advantages I had gained because of them.



Big Game Patrol

Itasca State Park was one of Minnesota's state parks under the jurisdiction of the state forester prior to the establishment of the Department of Conservation in 1931, and the creation of the Division of State Parks in 1935. Itasca was the largest of these parks but still had a small work force which often meant that many special work details were assigned to Forest Service employees.

One assignment made to a number of forest patrolmen annually was to assist with the big game season. Because hunting of white-tail deer within the park boundary was prohibited, forest patrolmen were assigned to patrol the outer boundaries to make certain that no hunters entered the park. This policy was continued over a considerable number of years even though there was ample evidence that the over-population of deer was severely limiting the regeneration of both the white and Norway pine.

During the early fall of 1929, Dana Worrall and I talked about the game patrol assignment and decided to volunteer just for the

experience. It was not an assignment that generally attracted volunteers so when we asked Grover Conzet about it, we were quickly accepted. We stipulated one condition, that we be wanted to work together as a team and this was allowed.

We reported to Frank Pugh, the ranger at Itasca Park, two days before the beginning of the season. At that time the dates for most hunting seasons were set by legislative action. The opening of the deer hunt was usually the Saturday nearest November 15th. We would patrol the day prior to the season opening, during the ten days of hunting season, and two days afterward. Hunters were allowed those two days to break camp and move their deer. We were to make certain that there was no after-season hunting adjacent to or within the park.

Since we knew Pugh very well, we felt it would be easy to be assigned to Anchor Hill. Pugh had a different idea; he planned for us to be at the park headquarters, a place we did not want to be. Though there would be the advantage of having our food prepared for us, we knew that there was also a disadvantage. Nearly every year at least two hunters failed to return to their camps by dark, and it was normal for their buddies to contact park headquarters and ask for assistance in locating them. This could mean being up all night. Those extra night hours would be in addition to the regular daytime hours, and therefore we wanted to be as far away from headquarters as possible. It took some doing but we convinced Pugh to change his mind.

We set off for Anchor Hill in the Park Rapids district Model T puddle-jumper. We brought groceries to take care of our needs for a week and several cream cans filled with water because there was no well at or near Anchor Hill.

When we arrived, one of our first duties was to locate some dry dead pine trees and convert them into a two weeks' supply of wood. Even though Forest Service cabins were generally vacated with the provision that there be sufficient dry wood for at least one day's fuel supply, seldom was there much more. We

did our wood cutting the hard way by using a two-man crosscut saw. Then some of the wood had to be split into fairly small pieces as our cooking would be done on a wood burning range. We also had to clean the cabin and before we could eat, it was necessary to wash all the dishes and cooking utensils even though the last occupant had undoubtedly washed them before he left.

It had often been told that Conzet had some favorite locations which were supposed to fare better in equipment and supplies than did others. When Dana opened the cupboard doors, his remark was, "This just has to be one of Grove's favorite places." The plates, cups, saucers, and dishups were all enamelware. In the Park Rapids district, and in most other districts, the dishes were all tinware. We discussed this and agreed that if we were ever promoted to a position where we were preparing a budget request, we positively would ask that the tinware be replaced with enamelware because it was much more sanitary, easier to keep clean, and did not rust.

The Anchor Hill tower and cabin were located on a high point of ground about a half mile west of the park boundary and about midway along the west side. Our patrol beat was about three miles to the south and a similar distance north along the boundary, which was also called the limit line. The limit line was free of trees and brush for a width of about five feet which meant it was fairly easy walking. Boundary and warning signs were posted every fifty feet or so, and it was nearly impossible for a hunter to accidentally cross into the park.

The day before the opening of the season, we went over our part of the park boundary to acquaint ourselves with it and also to be on the lookout for any hunters who might have decided to open the season early. The four inches of snow on the ground was more than sufficient to show the tracks of anyone entering the park. From a high point on the limit line we could see smoke rising from two different tent camps a short way to the west so

we visited them to make certain the men were familiar with the regulations concerning the park boundary.

Once the season opened our responsibility was to cover our assigned boundary four times each day. This could be accomplished easily if we patrolled separately which would mean a minimum of twelve miles of walking for each of us. We found, however, that we walked much more, particularly on cold days when we walked constantly to keep warm. We regulated our walking so we could return to the cabin for our noon sandwich and coffee. Since the cabin was about midway on our total beat, one would take the north segment in the morning while the other went south. In the afternoon we would hike in the opposite direction of the morning trip. On the warmer days we sometimes did a lot of slow walking with frequent stops but put in a full day on the limit line. It was always necessary to delay leaving the limit line until nearly dark. This was so that any hunter who had a wounded deer enter the park might be able to retrieve it the same day. Anytime we heard shooting near the limit line we would back-track, if necessary, to make certain that a deer had not been hit and entered the park. On our regular patrol we carefully examined all fresh tracks to make sure there was no blood spots in the snow indicating a deer had been wounded.

During that ten day season I had only one experience with a hunter who wounded a deer that entered the park. I had patrolled the north segment of our line and had waited at the extreme north point until I felt I had enough time to get to the cabin just before dark. About halfway back there was a hunter waiting on the limit line. He had wounded a deer and tracked it that far. I examined the track and there was no question that it had been wounded as it was bleeding badly. The hunter said he had been waiting about a half hour. This was definitely to our advantage as in all probability a deer wounded that badly would have lain down before going very far. If it had stopped for that period of time, it

might have difficulty getting up and definitely would have difficulty running.

The regulations concerning the boundary were that a hunter could not carry a loaded gun or shoot within the park. Therefore I carried his rifle and would need to be the one to shoot the deer. We moved very slowly as we could not see far in the rapidly approaching darkness. We had gone less than a quarter of a mile when I saw a buck deer get up to a wobbly standing position but make no effort to run. It was facing away from us so I needed to maneuver myself to a position where I could be certain it was the deer we were trailing. While I was doing this, it still made no move to run. When I had determined that it was indeed the deer we were after, I shot it.

It was a very big buck and the hunter was indeed happy. I had to wait while he dressed out the deer. Then with a great deal of effort, he dragged the deer to the limit line while I carried his gun. From there he had to carry his gun as well as drag the deer another mile to his camp so it was certain he would be mighty tired before he arrived. As I left the limit line, it was really dark and I was more than an hour behind schedule. When I reached the cabin, Dana was beginning to be a little concerned even though he felt fairly certain I was O.K.

The north segment of our patrol line went across a small marsh. One day as I was crossing I could see bits of red in the snow. By brushing the snow away I found the bright color was low bush cranberries. They were frozen and well preserved. Using one of my leather chopper mittens as a sack, I filled it with cranberries. That night we had a taste of fresh cranberry sauce. From then on we always carried a small paper sack and in a few minutes could gather enough berries to supply ourselves with the delicacy at every meal.

After a week at Anchor Hill we were getting low on groceries so, after we had prepared a list of our needs, we called park headquarters. We supposed that someone would bring them to us. We were quickly informed that if we wanted more

food we would need to go to headquarters to get it. We made the eight mile trip the next evening after supper. We arrived just after there had been a call advising of a lost hunter. They were organizing for the search, and we were told we were going to be a part of the search party. This was exactly what we had hoped to avoid by being at Anchor Hill. Fortunately for us another call came advising that the lost hunter had found his way back to camp. We quickly got our groceries and left.

Anytime Dana and I were together, we played cribbage. The periods of time between darkness and daylight were lengthy so we played every evening. Usually a definite winner was decided before the hour was too late. One evening it became a very heated session; the games were close and our wins and losses were see-sawing back and forth. To decide a conclusive winner, we played into the wee hours.

The following morning neither of us woke up when we should have and it was the jangling of the telephone that brought us out of a deep sleep. We had no idea how many times it had rung but had to wait until it rang again to know if it was for us. It was one long and three short rings, the ring for Anchor Hill.

It was near daylight and normally we would have had our breakfast and been on our way to the limit line. Dana answered the phone. And Frank Pugh said, "How many times does that telephone need to ring before you answer it?" Dana had been awake only a matter of seconds when he had to deal with that question, but he was up to it. He carefully explained to Frank that we were already outside the cabin and had closed the padlock when the telephone first rang. Dana told Frank, "It takes time to get a mitten off, fumble around in a pocket for a key and get a padlock open, especially when one is dressed for such a cold morning as this one." Frank's curt reply did not indicate that he believed Dana's answer, but he did accept it.

We really hustled around and had a quick breakfast even though we knew Frank would need to drive for nearly an hour if he was to get there and catch us. Before we were ready to leave

the cabin, the telephone began ringing again. It was one long and three shorts, the ring for Anchor Hill. As we walked away from the locked door, it was still ringing. Now we were certain that Frank had not believed Dana's story, but it didn't really bother us that he thought we would be stupid enough to answer the telephone again that morning.



Forest Service Paper Work

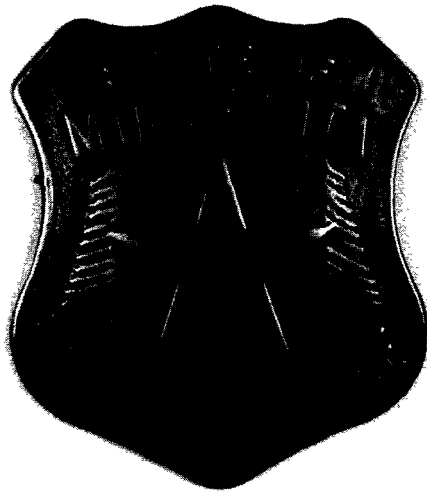
Late in September 1929 I was informed by letter from St. Paul that I was being promoted to the position of patrolman-at-large in the Deer River district. This meant that I would be the assistant to district ranger Mike Guthrie. This was great news for me as Mike was considered one of the better rangers. There were five forest patrolmen in the district, three of whom were seasonal. The patrol headquarters were at Marcell, Link Lake, Grand Rapids, Remer, and Deer River. Since the position at Deer River was seasonal and vacant at that time, I would be expected to also act as the forest patrolman until the position was filled.

The letter suggested that I make the move as soon as convenient. Within a few days Velna and I made the trip to Deer River to look for facilities to rent. The first stop was at the ranger station where I learned that St. Paul had neglected to inform Mike of my assignment. Mike was more than slightly disturbed by this oversight. It was months later that I learned that Mike had made a request to St. Paul for an assistant. Along

with the request he had suggested that they consider two of his district forest patrolmen for the position. His preference was Harry Olson, then at Marcell, or Tom LaLone who was at Grand Rapids.

Mike's displeasure with St. Paul for not advising him of my transfer did not keep him from helping us find a place to live. Modern rental housing was very scarce in most small northern Minnesota villages. We did manage to locate two rooms in which to live and to move our small load of worldly possessions by November 1st. On the day of moving I was assigned the district keys and one of the new style shield badges. I had made a step up from my former round badge.

I soon learned that Mike was a woodsman and did not particularly care for office work. Because there were no clerical assistants for field offices at that time and the district had not had an assistant to the ranger, Mike had been forced to do the paper work himself. He informed me that I would be expected to keep the district records and do most of the other necessary paper



The Shield Badge

work. My exposure to Forest Service clerical work was extremely limited, but I soon learned that Mike was anxious to teach me what he knew.

In reality the office work was comparatively simple. The written correspondence was limited and consequently there was a minimum of typing and filing, but for me it was very time consuming. Even though first class postage was only three cents and postcards cost a penny, we always had a problem keeping stamps on hand. It took weeks to get a check for postage processed so it was not uncommon for one of us to have \$10.00 invested in postage before the check came. Several times such an investment represented one-tenth of my monthly salary. We had a similar problem with the post office box. There was no mail delivery so it was necessary to rent a lock box at the post office. The postmaster, because of his regulations, insisted on the quarterly payment in advance before issuing a receipt. The state insisted there be a receipt before the check for payment would be prepared. The only solution was for someone to invest the \$2.70 for the nearly two months it took for the check to be processed.

The filing codes were simple, obvious designations. The only ones I recall are, O-E & S (equipment and supplies), and O-Pers. (personnel), and Z-Misc. It was surprising how much paper ended up in the miscellaneous file. The filing system had been adopted when the Forest Service was organized in 1911 and remained in use in the Division of Forestry until some time in the late 1960's.

All the record keeping was on specially designed forms and kept in three legal size ring binders. The general office record book was undoubtedly the most important of three. This book contained the information relative to all district expenditures. One section was devoted to fire fighting expenses. All fire fighting checks, whether for labor, materials, or rentals, were prepared in the district office. All these checks were individually recorded in the book before they were submitted to St. Paul. When they had been processed and became legal checks, they

were returned to the district where the check date and warrant number were recorded. Envelopes then needed to be addressed so the check could be mailed to the individual. The procedure was simple but extremely time consuming.

Another important section of the general office record book dealt with the equipment inventory. Great emphasis was placed on the accounting for all equipment and supplies. Items were in categories, divided between expendable and non-expendable. The fact that a fire fighting shovel was not considered expendable indicates the degree of equipment accountability required. Some items considered expendable were axe and shovel handles, hand files, and burlap bags.

During the month of January each district was obligated to take a physical inventory at each of the patrol districts as well as at the district headquarters. This was recognized as a responsibility of the patrolman-at-large. Very few warehouses or storage buildings were heated so the counting of items in the coldest month of the year was not pleasant. Inventory time was also when explanations were made for any lost or damaged tools or equipment. A special form was used which needed to clear St. Paul and very good reasons were necessary for any breakages or shortages. There was apparently something magic about the last day of January because if the completed district inventory report was not yet in St. Paul, there was certain to be a letter and someone had to have a good answer ready.

The second office record book was nearly always referred to as the "slash book." This was the district record of all reported timber cutting operations on privately owned lands. After each timber cutting operation was recorded in this book, a slash inspection slip was prepared. This was sent to the forest patrolman who examined the site and made recommendations concerning the disposition of any slash or debris. Any disposal recommendations were based on an existing or potential fire hazard. A great number of slash inspection slips were returned to the ranger with the notation, "no disposal required."

The third office record book was the field fire plan. It contained printed sheets for each township in the district. The top half of each page was a township map, one inch to the mile scale. When completed and maintained with all the proper symbols, the map was a record of the physical features and improvements which might aid in determining effective fire control procedures. The symbols concerning the driveability of the roads and trails were very important. There were many times when someone spent extra hours due to misinformation on the map. Other important map symbols indicated the location of all settlers and whether or not each had a telephone. The bottom half of each township map page was a rather broad description of the cover and fuel types as well as suggestions for possible fire control measures.

On the page facing the township map, the settlers' buildings were listed by a specific forty acres as well as the section number. If the settler had a telephone, his number as well as the exchange name was shown. At that time there were many small independent telephone companies. As an added fire protection measure the telephone operators with these companies were usually kept informed of fire reporting procedures. One of the purposes of the fire plan book was to help newly employed or transferred personnel to be better able to take effective fire control action. However, a problem existed because few of the books were maintained properly. Even though they were not usually up to date, I found that the information was of great benefit to me whenever I was assigned to a different district.

Art Linder, the only field inspector in those early years, placed great importance on the district fire plan. My first encounter with Art was in the summer following my assignment to Deer River. I was at the office alone one day when he arrived and asked to see the fire plan book. He selected Otenagen township as the one he wished to check and directed me to take him to a certain point. Art sat beside me with the open fire plan book in his lap. I can well remember that day for still another

reason. Art chewed snuff and I had just washed my car and cleaned the windows. He mistook the clean window as being open and I had the mess to clean up later.

There had been a considerable number of fires in that township during the spring so I had already met and talked to many of the settlers and felt I could answer most of Art's questions. I soon learned he was not checking my knowledge but rather what was entered in the book. As I drove by various farm homes, Art would point at the home or a spot on the map and ask, "Who lives there?" I generally knew and would give the settler's name. He would usually ask, "Are you sure?" before he told me the book recorded a different name. Since I was usually right, it did prove the fire plan book was incorrect. Needless to say it did not receive a good rating.

Mike and I talked about this later as I was concerned about the poor showing. It didn't bother Mike that much because he was a veteran of more than fifteen years and had faced more intense inspections than that one. Had Mike been along he would have given Art different names because he remembered what was in the book. At any rate we made some decisions about what would take place the next time. There was no next time, however, as no one ever checked the fire plan book again in the five years I remained at Deer River.

At the end of the calendar year each district submitted an annual report which consisted mostly of filling in blank spaces with numbers. Nearly all this information came from the three office record books. Even so Mike was glad to have me take over the job. The first annual report I prepared was from Mike's record keeping. I quickly learned how important those three books were because he had kept them in order and this made entering the yearly figures easy.

Mike and I were about equal when it came to office work, but not for the same reasons. Mike knew how it was to be done but preferred that I do it. I wasn't so sure how it was to be done but was willing to learn from him. We were also about equally

qualified at typing. Mike referred to our system as the Christopher Columbus method - discover and land. Nearly all the routine typing gradually became my responsibility.

Occasionally there were letters that only the district ranger should answer and Mike typed those. One day Mike had quite an experience with our typewriter. It was a rather old manual, securely bolted to a small typewriter stand which had both legs and wheels. A simple movement of a lever would lift the wheels and leave the stand firmly on its legs. Mike's habit was to pull the stand to his chair, wrap his heels around the legs to hold it, and proceed with typing. When he finished he would move his feet, give the stand a generous push and it would roll to its place across the room.

On this particular day Mike moved the lever to position the legs on the floor. Through habit he wrapped his heels around the legs. When he completed the typing he moved his feet as usual and gave the stand the usual push. This time it didn't roll but tipped over on the hard oak floor. Pieces flew in every direction and there were lots of them.

Later that day Mike wrote a letter, in long-hand, to St. Paul telling what had happened in the best way possible. He also asked for a new typewriter. After he had finished the letter he sat looking at it and said, "Opps (Art Oppel, Deputy State Forester) will probably write back and say to have this one repaired. I better settle that right now." Mike added a P.S. "In case you might think it can be repaired, we swept up nearly a quart of small parts and broken pieces with the broom and dustpan."

It was weeks before a replacement typewriter arrived. As we had expected, it was a used one. We learned later that a new one had been purchased and left in St. Paul. We were sent their old one.



The Log Office

When I was transferred to Deer River the office was a rented, one room, dilapidated building on the Minneapolis and Rainy River Railroad right-of-way in the south end of town. It was undoubtedly the poorest district ranger office in the state. Mike Guthrie had been asking for a new office and had long ago negotiated for a one acre site at the corner of the fair grounds.

In preparation for this new office, the district personnel had cut tree length Norway pine logs from state owned lands near Cut Foot Sioux in the Chippewa National Forest. These trees were very carefully selected as they needed to be straight, with little taper, free of blemishes and defects and with no limbs except at the very top. Each tree was as perfectly round as was possible to find, and all were the same size.

The logs were transported to the building site where they were carefully peeled. After peeling, the logs were meticulously piled so they could properly season for the next twelve months. It was during that period that a concrete foundation (no basement) was placed in preparation for the new building.

Construction of the first phase of the 20 x 26 foot office was carried on during the winter of 1929-30. The log sides, which included the gable ends as well as the inside log partitions to make three rooms, were erected that winter. Door and window openings were left the proper size but not filled. The roof was also left open so the logs could season further during the following summer.

The construction of a good log building requires highly skilled workmanship. Each log needs to be hewn so it will fit perfectly on the log below it. To fit the logs at the corners takes true craftsmanship so that no hairline of space will show when they are joined. The cupped space on the bottom side of each log must be large enough for strip oakum to be added for a little insulation. A great deal of precision and patience is necessary as each log needs to be rolled (which requires brawn) into and out of place a seemingly endless number of times in order to attain a perfect fit for the full length of the log both on the inside and outside of a wall. Those who worked on this building, as well as previous Forest Service log buildings, were regular employees who had or developed this special skill.

Jim Angell was the crew foreman and the final judge of workmanship. It was his eye that selected the proper log for a given place. He determined when a hewn log was properly fitted to be left in place. Crew members were Pat Bayle from the Grand Marais district; John Stenback, Floodwood; Herman Shipp, Duluth; O. M. Eckbeck, Finland; and Art Koppenberg, Pine River.

A house had been rented in Deer River where the crew ate and slept. The furnishings were standard for the Forest Service. There were double width double deck steel bunks, all with identical heavy cotton blankets. The kitchen range was the style usually found in a logging camp. There were benches but no chairs. The dishes and kitchen utensils were those normally used in a fire camp. Arnold Mikel, who was there as the cook, was

known in the Forest Service as a meat and potatoes man. He had little knowledge about pastry preparation.

It was not long before the crew began to ask about pies, cakes and cookies. Arnold put them off for some time and eventually promised that one day soon he would bake a cake. About a week later the cake was on the table for the evening meal. It was still in the large baking pan, frosted on top, and cut into generous squares. When Arnold was asked what kind of a cake it was, he answered, "A Dan McGrew cake."

As each of the men finished his meal, he took a piece of cake. After the first taste that it was obvious what the cake really was. But each one kept quiet as he wanted the others to be tricked as he had been. It was after the last one had bitten into his cake that they all knew that a Dan McGrew cake was really cornbread. Arnold had baked the cornbread and generously frosted it with chocolate. At the time of this incident I had been assigned to Deer River and lived only a few houses away from the crew's house. I happened to walk over to visit that evening and before long they insisted I have coffee and cake. They all had another laugh when I bit into a piece of Dan McGrew cake.

During the fall of 1930, Mike and I applied gallons of boiled linseed oil to both the interior and exterior log walls. After the oil had completely soaked into the logs as a preservative, two separate coats of a spar varnish were applied, again with hand brushes, as a sealer. After this work was completed, a crew came to put on the roof and lay the cedar shingles. This crew also built and installed heavy plank doors with metal strapping, put in the casement windows, and laid narrow oak flooring. The casement windows, two to each opening, swung inward and took up a great deal of otherwise valuable office space.

By this time it was late in the fall and winter was approaching. We were anxious to move into the new office so Mike and I began to work to make it ready. We did not realize how much work was yet to be done. The flooring was not the best grade of oak, and there were very noticeable differences in



The author and Mike Guthrie.

the thickness of the individual pieces. These differences had to be eliminated. Mike tried every possible means to obtain money to rent a power sander but was unsuccessful so we spent countless hours on our knees. First the uneven floor had to be hand scraped until it was reasonably level. Then it had to be hand sanded. Harry Olson and Tom LaLone contributed a little time, but Mike and I did most of the work and always had sore

knees and scraped knuckles. Before the floor was completed, we talked vaguely of renting a sander ourselves but ended up deciding it was beyond our financial capabilities. During all this Mike said dozens of times, "I wish I had never asked for a new office."

It was sometime after Christmas before we made the move into the new office. We already knew that we were moving from one cold office into another. We had learned that the New Maple wood burning heating stove was not capable of holding fire overnight. We would pack it full of wood when we left in the evening, but the following morning our ink would be frozen and the corks pushed out of the bottles. Ink was the only thing that could freeze as this office did not have running water. It generally took at least an hour each winter morning for the building to warm so we could remove our outdoor clothing and go to work. It was during those hours I learned the most about Mike. He had dozens of stories and experiences he liked to talk about, and there were few people with more wit and humor than Mike.

We had planned to build an outhouse before we moved into the new office but did not get it done before the snow and cold weather arrived. Frank Hughes had a gasoline filling station across the street and we used his facilities that winter. Of course we felt obligated to purchase gasoline for our personal cars from him.

That first winter we were in the log office, Dave Zetterstrom, a friend of Mike's, received a maximum-minimum thermometer for Christmas. Dave knew of the complete U.S. Weather Bureau instruments at the ranger station and wanted to check the accuracy of his thermometer. Those weather instruments were there strictly for the keeping of fire weather records and determining fire weather possibilities. For this reason they were never in use during the winter months, and the instrument shelter was left half buried in snow. Someone might occasionally clear away the snow to check what the temperature

had been on an extremely cold winter night, but otherwise it was never disturbed.

Dave's initial telephone call came just after 8 o'clock one morning as we were standing with our backs to the stove to keep warm. Mike waded through the snow to the instrument shelter after Dave explained why he wanted the information. After Mike reached the shelter box he realized the thermometers would not give accurate readings as they had not been set in the previous 24 hours. Mike decided to guess at what the readings might have been. He called Dave and found his guesses were far from what Dave had read on his thermometers. At the conclusion of a lengthy discussion of the differences, Mike told Dave that he should not expect too much from cheap thermometers. But Dave was determined with his project and each morning called for the temperature readings. Mike was just as determined he was not going to make that cold trek through the snow so continued to make estimates.

Mike did not have a thermometer at home but each morning on his walk to work he made note of the thermometer at the Miller Hotel. He used that as a guide in quoting an official low for the previous night. Usually he just picked a number for the previous day's high. Dave believed that Mike's quotes were official. It had become a game with Mike, but Dave was becoming more and more frustrated because the numbers didn't even make sense.

After more than a week the prank became too good for Mike to keep to himself. He told Doc Parmeter, a mutual friend, who embellished it a bit before relating it to many of Dave's friends. A couple of days later, when the morning phone calls ended, we knew that the story had gotten back to Dave.

Some of the men who worked on the Deer River building had assisted in the construction of earlier log office buildings for the Forest Service. The first one built was at Park Rapids in either 1924 or 1925. It was smaller and had only one room. The first three room log office was built near the railroad in

downtown Bemidji. That one became the model for other offices built at Blackduck, Cloquet and Moose Lake. Two others, constructed on the same plan, were at Finland and Sandy Lake and were intended for residences. The Deer River building was the last such building built by the Minnesota Forest Service.

For all that went into this building it had a short life for the Forest Service. In 1940 it was sold through a bidding procedure, moved to a new location in Deer River, and converted into a private residence. It was that same year that the Works Progress Administration (WPA) built a modern office building on the site where the log building had stood.

When the weather warmed, Stephan A. Steffonowicz (Steff) came to Deer River to drill a water well for us. The Forest Service drilled its own wells for a number of years including nearly all of the 1930's. I was assigned to be Steff's helper and soon found he was without doubt the strongest man with whom I had ever worked. He was a former professional wrestler as well as a qualified well-driller. Within two days Steff struck a vein of water at a depth of sixty feet which produced a continuous flow of water. No pump was ever attached to this flowing well because the excess water could run to low ground to the west of the office. It ran for years without being capped. Later in the fall of 1931 we managed to complete the construction of an outhouse and our ranger station, which was begun in 1928, became a reality.



The Cottonwood Lake Fire

The winter snows had melted; the sun was shining brightly, but it was too early in the year for the green of the grasses and leaves to appear. It had all the signs of being a beautiful spring day in northern Minnesota. If the wind did not increase in velocity and the relative humidity did not drop below 30%, it might even be a beautiful day for those of us committed to forest fire control. Those two weather elements were the most critical to deal with when a wild fire burned in the now very dry cured grasses and ferns of the previous year. At the beginning of a day we never knew what weather changes there might be.

The year was 1931 and we had no sophisticated fire suppression equipment. Nearly all forest and grass fires were extinguished by strong men using hand tools. If water was readily available, it was used in back-pack pumps. Generally water was not available so long handle shovels were used to either beat out the flames or to dig a trench to keep the fire from spreading. To put out a forest, or even a grass fire was truly hard and disagreeable work.

Each forest patrolman was required to furnish his own transportation to get to the fires. My fire fighting car was a 1923 Model T Ford. In this touring car I could carry some back-pack pump tanks, a few long handle shovels and a couple of axes. For furnishing a car I was paid 3 1/2 cents for each mile driven.

It was nearly 10 A.M. on an early May morning when the Blueberry Hills lookout towerman reported the day's first smoke. It was a barely visible white smoke with a 27 degree reading on the tower's sighting instrument. It was estimated to be about twelve miles from the tower. This information, applied to the ranger station office map, placed it near Cottonwood Lake, a locality where the terrain was such that no other tower would be likely to see it until it was an extremely large fire. I decided to investigate it with just the one tower reading.

As I got closer to the area, I could see the smoke rising higher and higher. Now there was no question that it was a rapidly spreading wild fire. Since I would be passing near the home of George Washington Skinnaway, I was prompted to try and get him to accompany me. George was a Chippewa Indian and a good worker who had helped me on several fires in the past. We were in one of those depression years, and the fire fighting pay rate was 15 cents an hour. Skinnaway was unemployed and was happy to accompany me if only for a few hours work.

We came to a narrow sandy road; the only road leading to Cottonwood Lake. The road ended at a dilapidated house on the south shore and the fire was just beyond the opposite shore. An old flat bottom wooden row boat, partially filled with water, was on the lake shore in front of us. The boat could possibly be our way of reaching the fire without walking around the end of the lake.

I went to the house to learn if the boat might be usable. As I approached the house, I could see the kitchen door was open. The screen door had a large gaping hole at the bottom. My rapping on the screen door brought the sound of footsteps from



—Minnesota Historical Society

Getting a good start.

the opposite side of the room. Either the sound of the footsteps, or my knocking, alerted a fifty pound pig that burst out of the kitchen through the torn opening in the screen door and stopped a few feet away, grunting.

The woman of the house, completely disregarding the action of the pig, listened to my story. She offered the use of the boat but said it still might leak. The water had been purposely put in it to soak the wood so it might be usable. She located the oars as well as a pail so we could empty the boat of water. She advised us to take the pail along as the boat had been soaking only a couple of days. It was well we took the pail as I was kept busy bailing water out of the boat as Skinnaway rowed us across the lake.

By the time we reached the fire it was nearly fifteen acres in size. We were in luck, however, as there still was little wind. We set out in opposite directions along the fire edge and put out the flames until we met on the far side. With no delay we returned, again taking opposite sides of the fire. This time we concentrated on putting out the rekindled flames and throwing burning pieces of wood back into the burned area.

It concerned me that there were a number of instances of rekindling, so I knew the fire could not be safely left unattended. Skinnaway read my thoughts and volunteered to stay with the fire for the balance of the day. For the first time in hours I looked at my pocket watch. It was past 2 o'clock, and I realized I was getting hungry. Yes, Skinnaway was hungry also, but he said there had been many times when he had been more hungry. He was certain he would have no trouble working until sundown without food. He knew a way around the west end of the lake so he could be home after a three mile walk. Even though he did not think it necessary, I told him I would stop and tell his wife of his plans.

When I arrived back at the place where I had left the boat, it was half filled with water. As I emptied it, I wondered how I was going to row the boat and bail out water at the same time. But I managed to get across without bailing. Possibly those few additional hours of soaking had improved the boat, but most likely it was because this time there was the weight of only one man.

After landing the boat and leaving it partially in the water so it could fill again, I put away the oars and proceeded to the house. When I rapped at the door, I fully expected to see the pig whiz by me again but there was no pig, and the woman didn't mention it when she came to the door.

She told me she had been waiting to fix me a lunch. The memory of the pig coming out of the kitchen and a second look at her very dirty apron, made me scramble for an excuse. The apron, made from a flour sack, was so torn and dirty that I could

barely read the word "Pillsbury" printed on it in large letters. It had been hours, I told her, since I had left the ranger station. Likely there were now more fires which needed my attention and I must get back. She countered with, "It's now 3 o'clock and you have to stop some place long enough to eat." I told her that there had been many times during fire situations when I had missed meals, and this would be just one more. Every excuse I presented brought a new offer from her. I was appreciative of her concern for my welfare, but my appetite did not seem to respond.

Her last proposal was that she make a sandwich that I could eat as I drove. I agreed to that and went back to bail more water into the boat so it could soak some more. When I returned, she met me in the yard with a sandwich neatly wrapped in waxed paper. I thanked her profusely for both the sandwich and the use of the boat. The sandwich was on the car seat beside me as I drove away. It was still there when I stopped to tell Mrs. Skinnaway of George Washington's plans.

Before I had driven another mile, I stopped on the very narrow road where there were trees close on both sides. My curiosity had gotten the better of me, and I gingerly unwrapped the package. There were two huge slices of home-made bread. I looked between them and there was a very large piece of half-cooked fish. The bread was well soaked with juices of the fish. I recognized it as being sucker, a rough fish which most people ate only when it had been smoked. A closer look disclosed small pieces of entrails. It had not even been cleaned properly. I looked longingly at the soaked bread since I was very hungry. I remembered how gracious and considerate the woman had been, before I threw the entire sandwich as far as I could back into the woods.

When I had resumed driving, I noticed the waxed paper wrapper remained on the seat beside me. Protruding from a folded-over edge was the end of a large pickle. As I looked at the pickle I became still more hungry. It began to look much

cleaner than the sandwich so I took a small bite. It was a home-made dill pickle and did it ever taste good! I reasoned that anything that had been pickled must be free of all germs and dirt. I ate the whole thing.



Timber Trespass

The Great Depression had a definite effect on my work while I was located in Deer River. Unemployment was extremely high and government work and relief programs had not yet entered the picture. The only form of aid to the needy was direct relief from individual counties. Most healthy, able-bodied people were very independent and were generally too proud to ask for county aid. These people were basically honest and most of them only wanted an opportunity to make it on their own.

There was an intermittent market for forest products, but for a few, making it on their own included breaking some laws. There was some demand for logs and pulpwood but more for cedar products, which included telephone poles and fence posts. It was unfortunate that the state did not have laws allowing for the sale of small volumes of such timber from state land. This happened to be the transition period when the supervision of logging operations on state lands was in a stage of being transferred from the state auditor to the Division of Forestry. Also, and largely because of the depression, many absentee

timber land owners were not paying their real estate taxes. There were no laws yet enacted for any public agency to manage tax-delinquent lands. These timbered lands as well as state lands were a temptation for those who might think of committing timber trespass.

Most of those who were illegally cutting timber were very small operators interested in feeding their families, so they were often referred to as "sack of flour loggers." One of these was "Sawbones" whose nick-name came from the fact he was more than six feet tall and weighed less than 150 pounds. Sawbones lived near Deer River in a very dilapidated log house and had a truck that was usually broken down. He and his frail hard-working wife had nine children, all living at home. We of the Forest Service often wondered how there was room for all of them in that shack.

We were well aware that Sawbones sometimes took state timber because he usually told us about it. He had a unique way of letting us know. He was a very friendly individual and would come to the office, apparently just to visit. After a few minutes he always gave a reason for leaving. He would go out, close the door, open it slightly, and say, "My flour barrel is nearly empty, " and quickly close the door again. Telling us was his way of feeling honest while he committed trespass on state land. I cannot recall that we ever had Sawbones in court. We did, however, speak often about those nine children and his frail wife.

I met Sawbones on a downtown street one day and after exchanging a few pleasantries, he said, "You never did find it, did you?" I had no idea what he was referring to, but it was not easy to convince him of that. He asked me if I didn't remember meeting him on the highway near Ball Club a couple of months previously. I assured him I couldn't recall the occasion. He was certain he had recognized my 1923 Model T Ford touring car; in all probability he knew that car as well as I did. He was certain I had looked him in the eye as we passed each other. When he

was satisfied I knew nothing about the incident, he proceeded to tell me the entire story.

On that day he had his old truck loaded with spruce pulpwood. He knew he was guilty of having removed it from state land. It was probably that guilt that made him so certain I had recognized him. He just knew he had been caught. When I didn't turn and follow him, he began to feel that maybe he had a chance. Then he realized that I might stop and telephone ahead to Mike at the ranger station - which he would have to pass if he took the illegal load to the paper mill. He decided he couldn't take that chance.

He left the highway by a trail through jack pine trees. Soon he saw a place where he could drive back into the pine, and there he unloaded the pulpwood. After waiting a few minutes to make certain he had not been followed, he continued on the sandy trail to another highway and eventually arrived at his home. He had every intention of just forgetting about the whole thing, but that night he got to thinking about how hard he had worked to get that wood and decided to try and retrieve it. He decided he had first better determine if it was still there. He walked a couple of miles in a round-about way to the place where he had unloaded. He watched the wood for an hour from a distance to satisfy himself that I was not there waiting for him. He told me, "I decided that I had more time than money and could afford the wait." During that hour he began to feel I had been there and put some identifying mark on one or two pieces.

After the wait he cautiously approached the pile of wood. Then he spent another hour thoroughly examining each stick to satisfy himself that they would not betray him. He said, "I imagined you could have even slipped a penny under the bark of an easily identified stick and could quickly pull it out after you caught me with the load."

Sawbones waited a week, so he said, before he went back with his truck to load the wood. He said he would stop as he was loading and listen every few minutes, still fearing I was

right on his trail. In apparent seriousness he closed his story with, "See how much trouble you caused me over that small load of pulpwood?"

We were not the only ones Sawbones was hood-winking. One day he told me how he sometimes fooled the paper company. During the winter months, after the Mississippi River had frozen over, the paper company would have the loggers pile the pulpwood on the river ice. Where the road went onto the river ice, there was a building which housed the scaler who measured the wood as it was brought in. Unloaded trucks had to pass by the scaler's view again as they left the ice. Sawbones would wait until after dark on a cold windy evening to get his load to the scaler. Knowing that the scaler would be anxious to complete the scaling and get back to his warm stove, Sawbones would offer to wield the stamp hammer. The scaler would normally mark at least half the sticks to show that the load had been scaled. Sawbones would do a lot of stamping but would repeatedly hit only a half dozen sticks. Then he would drive onto the river ice but would not unload. He would avoid passing the scaler's shack on the way off the river by using a different road. At home he would pull out the stamped pieces far enough to cut off the half inch necessary to eliminate the stamp hammer marks. That was a lot less work than cutting a new load.

Another trespassing expert we had to contend with was Harvey. Harvey was a young, bright, ambitious newlywed attempting to get a start in the world. Because of the economy, he too had resorted to taking forest products from any land other than his own. Sometimes it appeared as if he liked the challenge of avoiding getting caught more than that of making a dollar. It would have been a full time job just to watch Harvey because he operated any time of day and quite often on moonlit nights. He seldom cut, hauled and sold the products in one continuing operation. His method was to cut a truck load of wood and pile it in a reasonably accessible place. If he felt it had not been observed or disturbed after a week or so, he found a market for

it. Then he waited for what he felt was the most opportune time to move it.

I recall the time Art Ward and I happened upon a pile of freshly cut Norway pine logs in a place that was somewhat isolated but still accessible to a truck. It had all the indications of having been trespassed and it was only a few miles from Harvey's place. We determined they had been removed from tax-delinquent land over which we had no jurisdiction. We checked the pile a couple of times later when we happened to be in that vicinity, but nothing was changed. Late on a Friday afternoon I had a hunch those logs were being moved. Art and I drove to a place near the pile, then hiked to it. We arrived just as Harvey was placing the last log on his truck. Undaunted, Harvey merely said, "Well, you got me cold this time."

While there was a great deal of satisfaction in catching a clever trespasser like Harvey, there seldom was much satisfaction in the prosecution. If the trespass was on state land we most often, because of the existing laws, could only collect treble the value of standing trees. Sometimes, if we could positively identify one stick as having come from state land, we would seize and sell an entire pile of wood. If the trespass had been committed on tax-delinquent, absentee owned private land, the policy generally was to charge the trespasser with the forest law violation, "Failure to report cutting operations." When such a charge was once brought against Harvey, he said, "That is similar to charging Al Capone with income tax evasion." Thirty days in the county jail or a \$30.00 fine, plus court costs, was the usual assessment for such a violation when the person was found guilty. In some cases the justice of the peace would ask our opinion on the penalty.

At the beginning of World War II Harvey, who was married but had no children, was quickly inducted. When the war was over, Harvey returned home. Soon after that when I was in Grand Rapids, Harvey called to me from across the street. My son, who was then about twelve years of age, was with me and

we walked over to Harvey. We shook hands; I introduced him to my son and we talked briefly about his military service. He made no bones about telling me how well he had done dealing in black market cigarettes in Italy. After we parted my son said, "Is that the Harvey who gave you so much trouble when he stole timber?" I answered that it was indeed the same person. He then asked, "How come he was glad to see you?" I could only answer that this was an example of how one could be firm but fair in law enforcement and still be respected.



Township 60, Range 24

During the summer of 1928 I had been a member of a four man reconnaissance crew which had worked a few weeks in this township but had not completed all the necessary work. In January 1930 I was delegated to head up a small crew to finish the job.

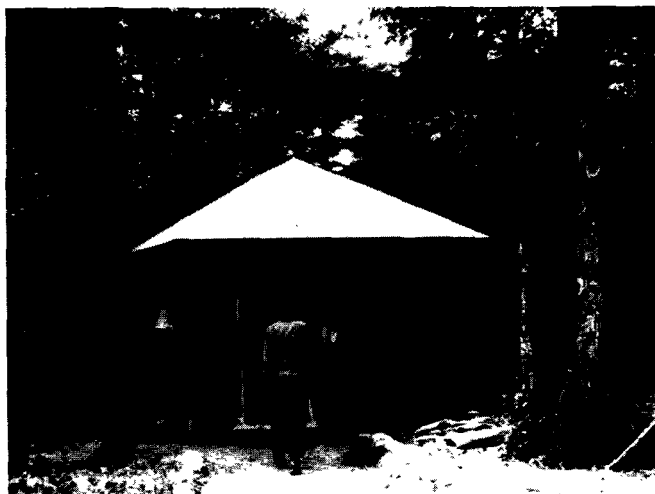
Tom LaLone, who was the forest patrolman at Grand Rapids, and L.B. Ritter who had just begun work with the Minnesota Forest Service, were the only men assigned to work with me. Most of the work to be completed was within three miles of our camp so a great deal of it was done by working individually. When the work to be done was beyond three miles, two men worked together.

We headquartered at the Link Lake patrol station. The only building was a palisade style, vertical log structure just fourteen feet square. It had definitely been built as a one man station. Here the three of us slept, cooked, ate and completed our field work sheets each evening. There was little more than room for the double deck double bunk, the heating and cooking stoves

and a small table and benches. Added to that were three grown men, their packsacks and their extra winter clothing, much of which needed to be hung each night so it would be dry and available for the next morning. When we all were in the building each morning and evening, there literally was no room to turn around.

A large and very destructive fire had burned parts of this township in 1926. A large portion of section sixteen had reseeded itself with jack pine and the new crop of seedlings was so thick one could hardly walk through them. In another area, I believe at the extreme northeast corner, was a dense stand of large Norway pine which had been fire killed but remained standing. These trees appeared to be sound and showed no evidence of beetle damage. In this area there was no sign of regeneration. This wood was too inaccessible to be marketed during the Depression and the trees undoubtedly fell and eventually became completely unusable.

One day when Tom and I were working together we found two fully established section corners, both representing the same



The Link Lake cabin.

point. They were equally weathered and definitely were part of the original land survey which likely had been completed forty years or more previously. The corners were separated by about twenty-five feet and each had the required four witness trees. The original land survey standards provided that there be four witness trees at each established section corner. A witness tree was to be a live tree, slabbed on the side facing the common section corner post and scribed for its section number. Without field notes we could resolve nothing but we did spend a few evenings speculating about what might have taken place.

Several days later I was working alone, attempting to locate a meander corner on the north side of Bass Lake which lies both in sections 35 and 36. I was out on the lake ice to better see a squared post or witness tree. When I did see a witness tree and its scribing, a large overhanging tree with wide spread branches prevented me from going directly to it. I moved over about twenty feet where there was an opening and in going through, came to a square scribed post. Further examination disclosed two separate meander corners, each with required two witness trees. From the weathering of the posts it was quite clear that both had been there a long time. The finding of these dual corners led to more speculation.

After this reconnaissance project had been completed, I was in the Itasca County Courthouse and decided to check the survey notes for this township. What I learned was most interesting. The contract for the original survey provided that the resulting map and field notes be delivered to the state capitol in St. Paul. They were being taken down the Mississippi River by canoe and somewhere near Brainerd, where there were some bad rapids, the canoe overturned and since only a small portion of the field notes were retrieved, the survey was not accepted.

Some time later a new contract was negotiated for this township to again be surveyed. The new contract provided that as this survey proceeded, the corners and witness trees of the first survey were to be destroyed. Since the corners we found

were only a few feet apart, it would appear as if no real effort had been put forth to locate and destroy the evidence of the first survey. I have often wondered how many more double survey corners there might actually be in that township.

While we were on this project we had a January thaw, a day when the temperature rose to above freezing. I was working alone that day and in crossing some low ground where tag alder was growing, I noticed how the blackened deer tracks stood out in the clear white snow. As I thought, a closer examination proved that the blackness was caused by hundreds of snow fleas. That evening in camp I casually mentioned I had seen snow fleas that day. Larry Ritter, who was fresh out of forestry school, began to ask questions. He, like many others, had heard of the mythical snow snakes. He had not heard of snow fleas. As I described them, Larry's grin spread wider and wider. It was obvious that he had not believed one word I had said.

A few days later the temperature again rose above 32 degrees. That day I made a special effort to pass through some alder, the best place to find snow fleas. They had gotten themselves in a depression but were unable to get themselves out. I carefully made a snowball, leaving the deer track and the snow fleas in a hollow center. I carefully carried it back to camp and left it on the chopping block by the wood pile. When Larry came in I told him I had gotten some snow fleas for him and directed him to the snowball. I watched him through the cabin window. He looked as if he was curious but still dubious and cautious. When he could not detect anything from the outside of the ball of snow, he carefully split it with an axe. When he saw the black specks, which were very much alive, he got out his pocket magnifying glass and spent several minutes examining them. As he came toward the cabin, his wide grin was evidence that he now knew there was such an insect as a snow flea.

Betty Bachmann, a long time secretary to a number of Minnesota State Foresters, wrote the following several years ago. She has given me permission to reproduce it:

SNOW FLEAS

There really are snow fleas. To most people a snow flea is a myth, or something that might infest the snoligoster or the agropelter, or any other of W.T. Cox's "Fearsome creatures of the lumber-woods."

The next time you see what looks like dark powder or soot on the snow where there should be no soot, see if it isn't snow fleas. Clarence Prout, deputy director of the forestry division, recently noticed them in snowshoe tracks up near Larson Lake. He took up a handful of snow with the fleas on it, and every now and then one of them would leap into space.

They are also seen in wagon ruts in the snow, where the wind has blown them, and where maple sugar is being made they are pests, collecting in large quantities in the sap. Although they are very animated little insects, they live in obscure places and are of too small a size to attract much attention.

Snow fleas are a very primitive type of creature and resemble the larvae rather than the adult form of other insects. They have no trace of wings, apparently have no tracheal system, and undergo no metamorphosis. Their segmented body is covered with hairs or scales. The forked tail, which is attached to one of the segments, is usually turned forward and held in position under the body. When released it springs back, striking the surface of support, enabling the little insect to catapult itself upward and forward a considerable distance when disturbed. This characteristic has also given them the name of "Springtails."

No one seems to know what they live on. They have never bitten either a human being or an animal to

anyone's knowledge. One supposition is that they may feed on the algae in the snow, being furnished with a curious tube or sucker on the underside of the first abdominal segment.

The Minnesota snow flea is doubtless the technically designated "Achorutes Nivicola", belonging to the family group known as the "Poduridae", according to Dr. Thaddeus Surber, game and fish biologist. It's specific name -nivicola- is derived from the Latin and means "living in the snow." Other species of the same family live on glaciers, in bake ovens, and under flower pots. Yes, snow fleas are real!!!

-Betty Bachmann-



The Ice House

Few of Minnesota's forest patrol stations had the convenience of water wells prior to the days of the CCC (Civilian Conservation Corp). Water was normally hauled and stored in cream cans which meant it was drunk warm and sometimes stale, except at the few stations with ice. In October 1930 Mike decided that Tom LaLone and I should build an icehouse at the Link Lake station even though there was no money budgeted for the project. I was in charge of seeing that the icehouse was built and filled with ice. Tom was to be my helper, and he did not have a reputation for adding much muscle to any project.

Tom and I went to the Link Lake station soon after the ground froze. We selected a spot for the icehouse, then cleared the area of trees and stumps before leveling a space fifteen feet square for the floor. Next we cut eight-inch diameter jack pine logs from nearby state land. We hauled the twelve-foot long logs to Link Lake and built a crude pigpen type of structure about ten feet square with three foot high sides. We notched the corners

where one log lay over another but left a space of an inch or two between the logs. We used long spikes at the corners to make the logs secure.

We next spread a couple of inches of sawdust inside, hauled from an old sawmill site nearby. Then we wet the sawdust and left it to freeze as the floor and also as some insulation. We arranged with a man named Jack to haul our ice, after it was cut from Lynx Lake, to the shore where we could load it on a truck. Jack lived on the lake shore with his Chippewa Indian wife and had a team of horses. He agreed to do this hauling for \$4.00. He said he needed the money right then and asked to be paid in advance. I paid him but never did get my money back because, when the check did come from St. Paul, it was mistakenly sent directly to Jack. He did the work however and we could not have finished the job without Jack's team. The best place to cut the ice was directly in front of Jack's house. The ice needed to get to about fourteen inches thick and this would not be for some time. I left a penny postcard with Jack and he agreed to mail it when his ice fishing told him that the ice was the right thickness.

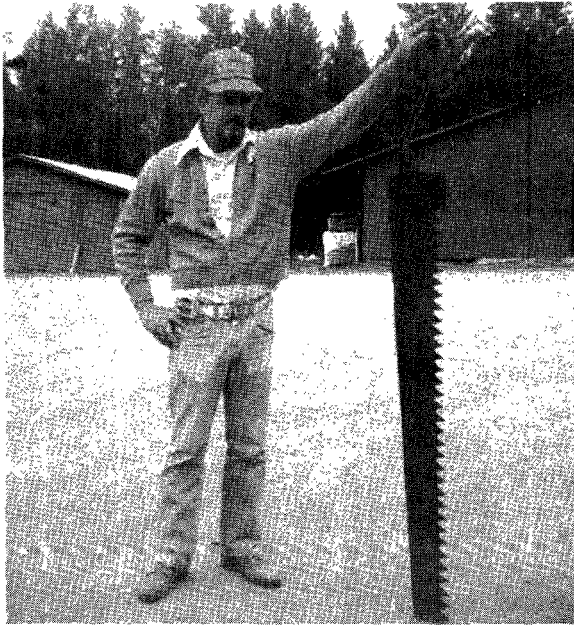
The Link Lake station had been named because of its proximity to Lynx Lake. The mispronunciation of "Lynx" had led to its eventually being written as "Link." Had this not happened, the station name might likely be known now as Lynx. The present ranger station buildings and ranger residence, built about 1935 under the CCC program, are on the high bank overlooking Lynx Lake. The original patrol station was about a half mile north of this location.

After the card arrived from Jack in late January, Tom and I went to cut and store the ice. We chose a place to cut the ice and removed the nearly two feet of snow covering the ice with snow shovels. By the time we had the snow carried to the sides of our cleared area, the weather had become so cold there now was nearly eighteen inches of ice.

The one-eighth inch steel cutting blade of an ice saw is about five feet long and seven inches wide at the top. The teeth are

more than an inch long and about the same distance apart. The sixteen inch long curved iron handle has an eye in the top end. Actually the handle was in two parts as through this eye, and crosswise to the saw blade, was a wooden handle about fourteen inches long. Both hands grip this wooden handle when the saw is in use. Anyone using an ice saw needs to be in excellent physical condition. Even so, muscles not normally used get a real work out. The saw cuts with a downward stroke, and because it weighs nearly twenty pounds, this requires little effort. It is lifting the saw back to the cutting position that is the real work. To cut best, the saw needs to be lifted each time so that one's hands are head high.

We made a hole about a foot square with an ice chisel as a starting place for the ice saw. Since our work, once we were in operation, was adjacent to open water, we had to keep a good



An ice saw.

grip on every tool and be certain our footing was always secure. An effort was made to see that the ice blocks were fairly uniform in size, usually eighteen inches square, which made handling, hauling and packing much easier.

Once we were in production, we would cut one side of a block of ice, and then try to cut the other sides as rapidly as possible. Slush ice would remain in the saw-cut behind the saw. If this was left as long as an hour, it would freeze and resawing was necessary. Because of this it was necessary to complete the sawing of each individual block of ice as rapidly as possible. Once all four sides were sawed, the block was broken loose and allowed to float away from the cutting area.

Each 175 pound block of ice had to be lifted from the water with sharp pointed ice tongs. Even with a toe hole chipped in the ice to push against, it took a well coordinated heave to lift each block onto the frozen lake surface. Splashed water quickly froze on our clothing and filled our toe notches. Because each block was dripping water, we had to be certain it was moved at least once after a few minutes or it would freeze to the lake surface ice. We completed cutting all the ice needed before any blocks were moved from the lake.

With Jack and his team of horses there, we improvised an incline using two eight foot long 2" by 10" planks. We slid the blocks up this incline until we had a load of sixteen blocks. The horses needed to move the sleigh load only 200 feet to the truck but the ice blocks had to be securely chained together and to the sleigh sides to keep them from sliding in every direction or even off the sleigh since our truck was parked two feet higher than the lake ice. We used the plank incline again to load the ice from the sleigh up into the truck. After the sixteen blocks which filled the truck bed were loaded, Jack would stable the horses and wait until we returned for another load. Even though we made a special effort to chain the load securely, the blocks slid around somewhat in the truck bed while we were on the narrow uphill road to the station.

It was much easier to slide the blocks down the planks, directly into the icehouse. The work here was to move the blocks into position so that there was about an inch of space between them. Then Tom and I pushed snow into the spaces to prevent the blocks from freezing together when they melted somewhat during the summer months. We left about a foot of space between the blocks of ice and the walls, which was later filled with sawdust. We placed a few inches of snow on top of the first layer of ice before we added the second layer. We packed the second layer in the same way as the first except that we covered the top with two feet of sawdust. Since the roofless ice house was widely exposed to the rain and sun, it is probable that less than half the ice would actually survive long enough to be used.

As we worked the last day on this job, we knew it was extremely cold. Neither we nor Jack had a thermometer but we knew from experience that the temperature had stayed well below zero all day. Because of the weather and the fact that it was late in the day when we finished, we decided to wait until the following morning to leave. We didn't rest much that night because we were up often to stoke more wood on the fire. Even though there was no wind, it was still abnormally cold by morning.

Following our breakfast we each had specific duties. Tom was to wash the dishes, pack the bedding and sling the mattresses from the cabin ceiling. Mattresses were always hung this way with the hope that the mice would not make nests in them before they were used next. I was to get the truck started; the coldest and most difficult job.

I dressed as warmly as possible. Even though I was certain it was useless to do so, I tried the starter. There was only a slight clicking sound. Next I tried the crank (all trucks and cars came supplied with a hand crank), but I could not move it even with all my weight on it. I drained the oil from the crankcase into a large pan. It came out like thick molasses. I put the oil on the

stove to warm, and then removed the battery and put it by the stove. I put the well-warmed oil back into the truck but still could barely turn the motor with crank. I drained the oil again. The engine block had so quickly absorbed what warmth there was in the oil that it came out nearly as thick as it had been the first time. When the oil was really warm again, I put both it and the battery back in the truck. Tom stepped on the starter as I assisted with the crank, and the motor eventually started. We wrapped all but the top inch of the radiator with a blanket until the alcohol solution we used for antifreeze warmed enough to circulate well. We never did remove the blanket.

We were finally able to leave, but our problems were not over. The truck had no heater and had a Shermier-Whitney wooden cab with many cracks and openings that let in lots of cold air. We had gone less than twenty miles when we were forced to stop at the Lawrence Lake country store to get warm. The thermometer there registered 55 degrees below zero at that hour. Many cheap thermometers were around then which advertised a variety of companies. Their accuracy was quite often questioned, but anyone who had one which regularly registered lower temperatures than their neighbor's treasured it dearly. We knew it was cold but did not believe it was as cold as 55 below.

We left somewhat warmer but went only the fifteen miles to Coleraine before we needed to stop again to get warm. We stopped at a Shell Oil Company filling station where they had a radio. As we huddled up to the stove, the Hibbing radio station announced that the official U.S. Weather Bureau thermometer reading at that time was 37 degrees below zero. It was a few minutes before noon. We got Tom to Grand Rapids where he lived before stopping a third time. Then I drove on to Deer River.

Mike was surprised to see me. He knew the official reading that morning had been as low as minus 55 degrees. His only

comment was, "A man should never leave a good axe out on a night like that."



Deer River Fires

The year 1931 was unquestionably the most difficult fire year of the period I spent at Deer River. The temperatures that year were much above normal and the dry conditions of the previous two years meant the great drought of the 1930's was under way. Most lowland areas were without the normal accumulation of snow melt moisture and nearly all the fires that burned that spring burned into the peat soil. The combination of unusual temperatures, strong dry winds, lack of rainfall and general absence of available water to extinguish fires, caused many of them to burn well into the summer months.

One swamp fire which stands out in my mind occurred west of Deer River and north of Highway 2. As an early spring fire, probably intentionally set, it had burned on both sides of a drainage ditch which meandered through the marsh. The cured marsh grass of the previous year made a very hot fire even though it had been started during the cool nighttime hours. When we first learned of it there were hundreds of small peat fires spread over about fifty acres. These peat fires were in the

ditch dump as well as in the open bog and getting larger daily as we were dealing with other new and spreading fires which were occurring. By the time suppression action was actually initiated, it had almost become one large peat fire, and tests showed that already it was burning to a depth of two feet and that there was more dry peat lower down. Minnesota's peat swamps vary greatly in stage of decomposition. This swamp happened to be new (in years or even hundreds of years) so was not well decomposed. In fact, we later found even three feet down, many grass blades in very near their original state. This meant that the peat was porous and the fire would continue to spread rapidly.

Water to drown that much burning peat definitely was not available so the decision was made to construct trenches to try to control the spreading. Emil Swanson, a part time farmer and a part time lumberjack, was engaged as a crew foreman. We had used Emil on fires previously and knew him to be a hard worker who saw to it that his crew members also worked hard. It would take a lot of dedicated labor to dig the required trenches. Emil soon found that cutting the dry porous material with a shovel did not work well. After trying several tools, including a hay knife, he found that the broadaxe worked best. Meant for hewing railroad ties, it was a heavy tool and took a real man to swing it.

In the digging of the ditches, a decision needed to be made as to whether to put the trench material on the fire side or to the outside of the ditch. If it was thrown on the fire side, there would be more burning peat and increase the probability that sparks from it would blow across the ditch to ignite new fires. If the diggings were thrown on the outside of the ditch, blowing sparks might ignite the fresh, loose, and soon tinder dry material even faster than the marsh surface. In this case, it was decided that it was far less hazardous to put the material on the fire side of the trench.

It was necessary to dig the trenches down to mineral soil, or the fire would burn under the trench bottoms. I recall one particular trench, made between two small islands of mineral



—Nadeau Photo, Minnesota Historical Society

Trenching in mineral soil.

soil, was nearly one-fourth mile long and four feet deep. At the bottom of this trench were millions of small snail type shells which were conclusive evidence that at some time the fire area had been a lake; we all wished that we might right then have a portion of that water.

Even when the twenty-four to thirty-six inch wide trenches were completed, the work was far from over. By this time the peat was burning to the very trench edges in many spots and burning peat embers were falling in. If these embers, along with some unburned peat, were not shoveled out, the unburned material of the opposite side could easily be ignited. This meant that someone had to walk through the smelly smoke and heat to

constantly patrol the windward side of the fire area. For weeks, even on days when the wind was calm, this constant patrol was necessary. Each morning it was necessary to clear ashes from the trench bottom. Some ashes had always fallen in and there was always some live fire in the accumulation.

Each morning there were also new burning spots on the outside of ditches. These spots could have started during the night from blown embers or they could have gone undetected from the previous day. The dampness of the early morning hours was most helpful in detecting these spots. Even a small amount of moisture in the form of dew was enough to make the smallest of smokes, which would not have been seen in the daytime hours of low humidity, visible. Peat fire is extremely difficult to deal with under the best of conditions, and we had



—Nadeau Photo, Minnesota Historical Society

The peat soil burned.

some of the worst. By the time this fire was out, it had burned for more than a month and as deep as five feet, but only covered some fifty acres.

There was no presuppression money in those days. If some funds could have been spent before a fire actually started or if there could have been standby crews, even the drought years would not have taken so great a toll. Another unusual fire that burned that spring also happened to be a marsh fire. I spotted it as I was returning alone from putting out a small fire near the Winnibigoshish Dam. Of course this was long before two-way radio so it was always necessary to return to the ranger station to learn of a new fire or where to go next. In this particular case I found my next task before I got back to the station. As I neared the Chippewa Indian powwow grounds, I could see a smoke ahead. Directly across the road from the Indian grounds was a small fire. The size and location of the fire indicated that it had been purposely set only minutes before. Unfortunately there were people who could not resist touching a match to any dry grass they might see.

There was little wind but it was blowing away from the road. After quickly sizing up the situation I felt I could deal with the fire all alone. It was certain that if I went for help, it would be considerably larger when I returned. I had the two pump tanks that I always carried in my personal car. I was glad I had refilled them after I had extinguished the Winnibigoshish fire. I unloaded both tanks but took only one and began flanking the fire on what appeared to be worst side. Things went well and by the time I had used the water from the first tank, I was much more than half way around the fire. It was only then that I noticed that this small grassy area narrowed down to a few feet before it expanded into hundreds of acres of marsh grass beyond. I felt I could quite easily control the flames before they reached the narrows.

I hurried back for the second tank. As I was returning with it, the wind suddenly increased and the flames began to spread

much more rapidly. The wind was taking the flames directly toward the narrows. The flames were also much hotter and required more water. I worked frantically, still feeling I could win the race. Suddenly I was out of water. There were only a few feet of flames remaining. I began beating them with the only tool I had, the empty pump tank, but the flames drove me back. If I only had one more gallon of water. I watched hopelessly as the fire was carried through the narrows. It eventually burned more than one hundred acres and a great deal of money was spent during the two weeks it took a crew of men to put it out.

There was another kind of deliberately set fire that caused us concern that spring. A few miles northwest of Deer River there lived a red headed Irishman whose name I cannot recall. "Red" was clearing a few more acres to enlarge his small farm. As soon as he had a couple of piles of brush he would set them on fire. He was never concerned about fire weather conditions. Each time a smoke was spotted coming from his place I would make a trip there and lecture him on the fact he was violating a forest law. Each time I returned to the ranger station I would tell Mike I thought we should have Red arrested. Each time Mike Guthrie, the district ranger, would talk me out of it. Fortunately Red's fires never escaped but the possibility was always there. After several trips out to his place I decided that if he burned any more brush piles without a permit I would at least threaten him with arrest even though Mike said that the justice of the peace likely would not do much unless Red's fire actually damaged someone else's property.

The next time the lookout tower reported a smoke at Red's farm, it was late in the afternoon of a rather bad day for fires. I was pretty steamed by the time I arrived. Sure enough he was standing between two brush piles which were burning briskly. As I approached him and before I could say a word, Red began talking. He said, "I have just decided that you have made enough trips out here to chew me out and I have decided to change." He continued, "I'll tell you what we'll do. I have some

home brew (this was during prohibition) so let's go to the house and have a beer, and I will promise never to start another fire without a permit." I was flabbergasted. I had come to deal with him firmly and here Red was doing the dealing. Something about the way he spoke and the expression on his face convinced me he was indeed sincere. I agreed to his proposal.

We went to Red's kitchen where he had a ten gallon granite crock behind the wood burning range. He carefully pushed aside a yeasty foam and ladled up two large glasses of liquid. The amount of foam made me wonder if the brew was ready. I was almost afraid to sample it but after much hesitation, took a sip. It was undoubtedly the most foul tasting liquid I had even encountered. Red was smacking his lips while he further convinced me he was going to change his brush burning habits.

After quite gracefully refusing a second glass, I left Red. As I drove away, I hoped I would never again need to seal a truce that way. Red was true to his word, and from then on he always obtained a burning permit.



Starting Fires For Pay

During the very early years of the Great Depression, times were really tough. The year 1931 was one of those years and because of the drought, Minnesota was experiencing many fire problems. During that year there was still no federal work or relief programs such as SERA (State Emergency Relief Administration), PWA (Public Works Administration), WPA (Works Progress Administration), TRA (Transient Relief Administration), or CCC (Civilian Conservation Corps). These were the primary organizations whose work programs would so greatly affect the nation's forest lands. Unemployment was already exceptionally high, and the economy was in a terrific slump. In Minnesota, what little assistance there was for the needy came directly from and was determined by the individual counties. Few counties were financially able or willing to do much more than dole out direct relief for those families in dire need.

There was general reluctance on the part of most to ask for any kind of aid. They had not become accustomed to feeling that

some level of government "owed them." Their attitude was totally different, and pride was an important and treasured part of their make-up. Most felt strongly that it was their obligation to make it on their own if at all possible.

Minnesota, as well as most mid-continent states, was experiencing a period of great drought that same year. The drought period actually began in northwestern Minnesota in 1929, expanded to most parts of the state by 1931, but did not reach its peak until 1936.

There were many rural people in the forested part of the state who had resorted to trespassing on timber lands to cut forest products in order to make a few dollars. These people were often referred to as "sack-of-flour" loggers. Largely due to the absence of a ready market, this was not a dependable solution so some felt the need to resort to still more drastic measures. One of these was starting fires in the woodlands or helping them to continue to burn in order to collect the meager fire fighting wage.

The springs months of 1931 in the northern part of the state were extremely dry. Not only were there a great number of fires, but most resulted in some sort of ground fire, especially in peat. That spring was also one of very low snow melt so there was a definite absence of moisture in the swamps and a deficiency of sub-soil moisture. Generally this made it more difficult to put out fires and made it easier for them to spread.

My recollection is that at the beginning of the spring fire season we were allowed to pay a maximum of 25 cents an hour for fire fighting labor. The increasing number of fire starts and the additional cost to extinguish them soon threatened depletion of the fire fighting account. Sometime in very early May we were directed to reduce the pay to 15 cents an hour. I recall there was even a hint to reduce any form of fire action if doing so would save additional money. I recall Mike Guthrie's words very clearly, "Paying for fire fighting is going to be St. Paul's problem. Effective fire action will be our problem." Of course,

the reduction in pay was an attempt to stretch the appropriation until June 30th, the end of the fiscal year.

Each day the economic conditions were worsening and the pride of the people still prevented them from asking for a direct handout. Some had arrived at that point where they would do almost anything which would allow them to earn a dollar. This meant that there were those who would resort to actually setting fires for pay.

There were many incidents of fire fighters throwing their shovels in the flames so that the handles were burned off. Other workers purposely broke shovel handles by prying them between two trees. There were instances when backpack pump tanks were burned or a part broken so they could not be used. These practices were quite common and without tools the fire fighter had an excuse to merely watch the fire burn. Even though the fires were prolonged, these people apparently felt less conscience stricken than if they had set the fire.

But there were those whose guilt did not bother them that much. There were incidents when we were certain that fire had been carried outside the burned area and a completely new fire started. Our knowledge of the fuels, existing relative humidity, and primarily the wind direction and velocity, sometimes led us to be certain that a new fire start had needed some assistance from man.

Nearly all fires that spring needed to have some sort of an exterior line established in mineral soil; in most peat fires that sometimes meant going very deep to get to mineral soil. Following the establishment of such a line, the fire needed to be patrolled to be certain the fire did not escape. The patrol was often by only one man who might have a segment of the line or possibly the entire fire boundary. Due to the great number of fires that were occurring it was not always possible to carefully screen the man left to patrol. There were instances when the fire was allowed to cross the line, burn for several feet on the outside, and then be extinguished. This provided the man

patrolling with good evidence as to why he should be paid to patrol for some additional days.

There were numerous instances when it was felt fires were purposely set. In most cases there was sufficient evidence to convince the ranger but too little to prosecute. Many times it was just a matter of suspicion based on circumstantial evidence. During that spring I felt I had my fair share of experiences relating to broken tools and seemingly controlled fires moving across generally adequate fire lines. Even with the drought, we could not justify escaped fires especially when the weather was in our favor. Mike and I discussed many of these incidents and always concluded that there was too little evidence for legal action. They had just outsmarted us, and there was little that we could do about it.

My most unusual experience occurred about midway through the spring season. Districts at that time were sometimes larger, and transportation facilities were poor. Once one left for a fire there was no more communication with the ranger station. On this particular day, after the fire fighting wage had been reduced to 15 cents an hour, a tower reported a rapidly spreading smoke some fifteen miles away toward Remer.

Unable to get a reading from another tower to pinpoint the location of the fire, I left anyway with the few fire fighting tools I was able to carry in my Model T Ford. I was alone and, as was normal, expected that I would be able to recruit, after I had determined how many I would need, a few fire fighters in the vicinity of the fire. After I arrived at the fire, which fortunately was adjacent to a county road, I could see an old truck parked and evidence that someone was working on the fire. Shortly after starting around the head of the fire, I came upon four men really working at controlling the flames. I later learned it was a father and his three teenage sons. I went to work with them, and in a couple of hours time we had the fire confined to about five acres. The fire had burned where there were aspen saplings and very little annual vegetation so it was a rather slowly spreading



A crown fire.

fire in the existing weather conditions. I really appreciated the fact that there were men on the fire working diligently to suppress it, and as I entered their names in the time book, expressed myself as graciously as possible. The father told me that they just happened to be driving that road when they saw the fire. Everything indicated that the fire had started adjacent to the county road even though I could find no evidence to substantiate that belief. I left the fire feeling very fortunate that I had found the crew working.

A few days later, and again on a fairly bad fire day, the lookout towers pinpointed a smoke in the same general area. Again I left to check on it and again planned to get a local crew if needed. This fire proved to be only one half mile from the previous one and the same old truck was parked there. On the fire line I soon came upon the father and his three sons, again working hard to suppress the flames. This time the fire was larger and took more time to bring under control.

This time I questioned them more carefully about their saying they "just happened to be going by." The details the father gave caused me to be quite suspicious but I was forced to accept his answers. As I was driving back to Deer River, I rolled all the events over in my mind and concluded I had probably been duped. I outlined all the events to Mike, who raised his eyebrows and said, "Maybe."

It was only two days later when I was again sent to the same general area to check on a reported smoke. As I drove a thought came to me as to what I would do if the father and his three sons were again at work on the fire. As I rounded the curve and saw the old brown truck parked at the fire, I knew what I would do if again there was only circumstantial evidence available.

After we carefully extinguished all signs of the fire, I loaded the tools in my car. These were tools I had left with them to use in patrolling the last fire. As I prepared the time book I said, "We have a new policy to deal with. Effective yesterday and because of the shortage of fire fighting funds, we are now allowed to pay only five cents an hour." I could tell by the way the father's face fell that this had hit home. As I saw the quick glances between the others, I became more certain of my suspicions.

That was the last time I went to a fire in that locality and I never saw the father and his three sons again. They had apparently decided that such an activity was worth more than five cents an hour. They actually were paid the standard fire fighting wage, but by the time their checks had been processed the spring fire season had passed.



Oscar

In February 1936 I had been the district ranger at Hill City for more than a year. The problems related to the Great Depression had not yet been resolved. We were continuing to have difficulties with the trespass of timber from state lands.

It was late February and a real Minnesota blizzard was raging with full force. It had been snowing heavily since the night before and a cold northwest wind was piling the snow in huge drifts. At mid-morning only Louie, Noble and I were at the ranger station. Someone had just stopped and told us that the state highway east of town was already blocked at a deep narrow cut in the road that was familiar to all of us. It would be days before that road would be opened to travel.

Within a few minutes Noble said, "I'll bet Oscar will be in the Swan River swamp on a day like this." Louie and I knew that he was referring to the eighty acres of state land south of the community of Swan River which was well stocked with vigorous black spruce trees. All winter when any of us happened to drive the only road that went by this tract, we

always looked to see if there were new sleigh tracks leading into those trees. Each time we saw tracks in the new snow, investigation would disclose that a few selected trees had been cut and possibly a cord of pulpwood had been removed. After each incident we always remarked how carefully only the largest trees seemed to have been selected for cutting. Whoever was doing this was indeed practicing good forest management. Just before the storm we had learned, through legitimate sleuthing, that Oscar had on several occasions sold a cord of spruce to a local timber dealer. Oscar lived close to this state land and to our knowledge had no black spruce on his own farm nor had he reported timber cutting on any other lands. We had absolutely no evidence, but in our minds Oscar was considered a prime suspect.

After Noble's remark I sat gazing out the window at the cold wind swirling the snow into rapidly developing drifts in the ranger station driveway. My thoughts were, "Would it possibly be worth the hardship?" After a few more minutes of wrestling with the question in my mind, I asked, "Who is game to see if anything might be taking place in the swamp today?" There was no hesitation on the part of either Louie or Noble. They both were more than willing even though they knew it likely would mean a very rugged day. It was not just the thought of keeping another cord of wood from being stolen. It was also the challenge and the satisfaction that would result if we were able to outwit someone who had been outmaneuvering us for the past few months. In order to have the greatest chance for success, we discussed and decided upon a plan.

We decided that because of the weather and probable road conditions, we would all go. A couple of telephone calls satisfied us that there was little likelihood that the other state highway we could use would be closed before we could get back. Each of us had brought a noon lunch so in a matter of minutes we were on our way. The long way around brought us to a point that was still two miles through the woods from the

spruce swamp. Using snowshoes we arrived there just before noon.

Very carefully and quietly we began the search for any evidence of timber cutting. Within a half hour we located a small pile of freshly cut spruce. Because of the light covering of newly fallen snow on the pile we knew the wood had been cut that morning. We surmised that the party who had cut the wood had gone home for lunch and would be coming back. There was no evidence of tools but there were foot tracks leading away from the cut wood. We were careful not to get near either the wood or the tracks. We decided to wait until the culprit returned and hoped that we might see him actually cut more trees.

The storm had not abated one bit; in fact the air seemed to be getting colder and wind stronger. The snow was still coming down quite heavily. While we were snowshoeing and moving it had been easy to keep warm. Now that we were standing still we chilled quite rapidly. We located a clump of trees where the lower limbs were down to the snow. This was about 500 feet down wind from the spruce pile. Here we built a small warming fire. We needed to be down wind so our trespasser could not smell the smoke from our fire. Within sight of the pile of wood there were two spruce trees close together and with low branches. From our fire we could approach these two trees and watch from behind them without being seen. From this point one man at a time would keep the watch.

For the next hour our real problem was keeping warm. The one who was on watch did not dare to move around for fear of disclosing his presence. The fire had to be very small so it would create only a small amount of smoke and its warming effect was little more than psychological. The only thing we could do was to change lookouts every few minutes. It was only a short distance between the fire and our lookout point but snowshoeing between them helped to keep our blood circulating.

We made many trips back and forth and soon had a well packed snowshoe trail. It was my good fortune to be at the lookout point after one of the changes when I heard footsteps crunching in the snow. I soon located the source. It was a lone man with an axe and saw trudging toward the cut pile of wood.

As I watched him I also kept watch in the direction of our fire. When Louie, who was to replace me, came into sight I signaled him that we had a visitor. He went back to get Noble. The three of us huddled behind the two spruce trees and watched. In spite of standing still our blood was circulating now. We now knew it was Oscar. He moved quietly and cautiously as he selected a tree less than 150 feet from us. He carefully cleared the snow away from the base of the tree and looked around before he knelt down to begin sawing. We were fortunate that he knelt down with his back to us. During all his maneuvering we had planned that we would wait until he actually felled the tree before we approached him. But now since his back was to us I had another idea.

When the man began sawing I crept from behind the branches and started to snowshoe quietly toward him. It seemed only a matter of seconds before he stopped sawing and raised his head to listen. I stopped also and when he began sawing once more, signaled Louie and Noble to follow me and moved forward again. He stopped to listen three times, but each time we stopped moving when he stopped sawing. Of course the noise of the wind through the trees was much in our favor. He never did look back and we crept closer and closer.

When he stopped sawing the fourth time, I was less than twenty feet from him. As he lifted his head to listen I said loudly, "What in hell are you doing?" You can believe that I really startled him. He was on his feet in a flash and then said, "No speak English." Evidently he had realized the possibility of getting caught and planned what he would say. We knew that although he was Finnish, he did speak broken English. However I said, "You take your axe and saw and get out of

here. You understand that, don't you?" It was clear that he did as he gathered his axe and saw in his arms and started rapidly walking away. After all, he was alone, illegally on state land with three rangers watching him. To his back I said, "If you are not in the sheriff's office by nine o'clock in the morning, I'll send him after you with an arrest warrant." He neither looked back nor slowed his pace.

We were at the sheriff's office before the stipulated time the following morning. We really had not expected Oscar would appear voluntarily. After consulting with the county attorney about the case, we proceeded to the office of the justice of the peace where complaint and arrest warrants were prepared. We had a two hour wait before the sheriff's deputy returned with Oscar. Accompanying them was Toivo who said he was Oscar's interpreter. I was certain that Oscar could speak some English and I told Toivo that. Toivo, whom I knew well, only answered with a smile and , "He says he doesn't understand English."

The trial was held that afternoon and we presented our case before Judge Critchfield. Toivo carefully explained the proceedings to Oscar who had nothing for a defense. The judge found Oscar guilty as charged and gave him the option of serving thirty days in the county jail or paying a fine of thirty dollars plus the court costs. The judge's costs were three dollars. Added to this was the mileage for the deputy sheriff. Following considerable conversation in Finnish, Toivo told the judge that Oscar had decided he would spend the thirty days in jail. We learned later that Oscar did understand English but had decided upon these tactics hoping to gain sympathy from the court.



The Cedar Poles

On a winter day, as I drove across the railroad where it crossed the south Swatara road, I thought I saw sleigh tracks along the railroad right-of-way. At that time, largely due to the Depression, timber products were too often being cut and removed from forest lands without proper permission or authority. We in forestry had become suspicious of any track which might lead toward timbered lands. Backing up my car on the narrow snow-plowed road, I could easily see it was a well used sleigh road. Walking it for a distance of about a hundred feet, I saw that the sleigh or sleighs had been pulled by horses. A close examination told me that several trips had been made over it, and from the imprint of the horse's hooves I decided the last trip had been away from the Swatara road. However, I could find no pieces of tree bark, the usual evidence that some forest products had been hauled.

At the car I checked my forestry field book and learned that while there was no state owned land in that immediate vicinity, there was a sizable block of county controlled tax-forfeited land.

I looked at the very cloudy sky and then at my watch. At the very most there would not be more than an hour of daylight left. Should I forget I had even see the sleigh tracks? Should I wait until morning or should I check it out now? I quickly made my decision, and moved my car to one side of the snow-plowed road. I realized that this would be one more time when I was caught out after dark.

I followed the sleigh tracks for nearly a mile at which point they turned abruptly to the right onto an old logging road which led into a dense stand of northern white cedar. Within a few minutes I came to a team of horses unhitched from their sleigh and eating at a small pile of hay. Nearby was a pile of freshly cut cedar telephone poles of various lengths. As I climbed to the top of the pole pile, I decided it would make a big sleigh load.

It was one of those very quiet winter days when sounds carry for great distances. At the moment the only sound was that of the horses munching the hay. Then off in the distance I heard blue jays calling. I could see two lunch pails which indicated that there were probably only two persons. As I waited and listened and watched, I could see no evidence of the poles having been skidded to the pile. They must have been carried which indicated there were two brawny men nearby. As I continued to listen, I could hear voices. It was now getting dark and in the dense woods I could not see far. I could make out their words before I could see any one. Only one was talking, and he was outlining how they would now load the sleigh with the telephone poles. By the time they were loaded, he continued, it should be good and dark, and they would be able to get home without being seen.

I sat down on the pole pile to better see under the branches in the dwindling daylight. The man I saw first had the top end of a telephone pole on his shoulder. The pole was on the shoulder away from me so I could tell he was not the one doing the talking. The man carrying the butt end of the pole now was in my view and he had it on his shoulder nearest to me. While I

could not see his face, I knew he was the one doing the talking. Then I recognized the man ahead as Clyde, a man I knew. He looked up and saw me but was apparently too startled to say anything. The voice continued but I still could not see the other man's face. Then he said clearly, "This will be one time when Don Wilson won't catch us."

They had now reached the pole pile and dropped the pole off their shoulders. Now I recognized Bill, another person I knew, but I did not say a word. I knew both Clyde and Bill by sight but had experienced no previous associations with either. It was definite, however, that they were aware of what my responsibilities were. When Bill looked up and saw me, it was easy to see by his startled expression that he was quickly reviewing what he had just said. With a smile he said, "Well, I guess you know now how we are going to get these poles out of here without you catching us." This climax seemed so amusing to me that I broke into laughter and both Bill and Clyde joined in.

I had already determined that the cutting was on lands under the jurisdiction of the county and I was obligated to report the situation. I explained this to them and they assured me that all the trees they had cut were in the pile. I then counted and measured the poles as best I could in the little remaining light. This information was later given to the county auditor. Bill and Clyde were billed for three times the stumpage value of the cut products but there was no legal action. I am certain that had the county a policy at that time of selling mature timber from such lands, Bill and Clyde would have purchased it before cutting.

I next saw Bill forty years later at an appreciation dinner. He did not recognize me as I shook his hand. After a few seconds I said, "You looked up one time and saw me on a pile of telephone poles." He remembered immediately and we had another good laugh. Later I overheard him relating the incident to another party so I knew we were still friends.



The Costly Fire

From the vicinity of McGregor and for miles to the northeast, there is a vast area of lowland marsh grass, even in the drought years seldom cut for use as animal feed. Shortly after the beginning of the 20th century, a system of drainage ditches had been dug throughout this area supposedly to prepare the lands for anticipated agricultural pursuits but these had not materialized to any great degree by the 1930's.

When dry conditions made it possible, it had become a customary local practice to burn as much of the grass accumulation as was practical. Such burning was usually carried out without a burning permit and most generally during the late evening or nighttime hours. Many of those who lived near the border of this grassland area felt this was the desirable time to burn in order to reduce the likelihood of personal losses. Many of us in fire control felt strongly that there were some starting fires who merely derived pleasure from seeing the area burn.

Usually the burning was done when there was little wind and this was generally good assurance that private property and

buildings would be safe. But the fires usually destroyed tree seedlings or saplings that might have been there following the last burn. Too often the fires moved onto non-swamp lands and destroyed mature valuable timber. During periods of drought the peat soil would be ignited and there were many burn-out holes throughout the area.

It was sometime in early May when Ed Bright called me advising that such a fire had burned over the entire area two evenings previously. Ed was the forest patrolman in that district and headquartered at the Sandy Lake station. The wind at the time of the fire had been from the southwest. Ed assumed that the fire had been started somewhere near Mc Gregor. It had travelled nearly ten miles during the nighttime hours before the high humidity during the early morning hours had caused the fire to go out of its own accord.

Late the second day following the fire Ed had completed a walk around and through the burned area. He then called me to say that he had found there were about eleven miles of drainage ditch dump in which there were innumerable peat fires. In addition there were many peat fires burning in the open bog lands but those were fewer in number than in the ditch dumps.

It had been only a few months since I had been advanced to the position of district ranger. In some portions of the state at that time there seemed to be an unofficial and, to me, a most questionable policy of allowing peat fires caused from spring grass burning to continue with no suppression action. It was expected, or at least hoped, that they would be extinguished by summer rainfall before they became a fall fire hazard. The prime basis for this action was to save the limited fire suppression funds.

At a meeting of the patrolmen of my district I had expressed my feeling against such a policy. For this reason Ed was hesitant to make a decision relative to all those peat fires. He wanted me to see them and apparently expected I would make the decision. We spent another day tramping the fire area.



—Nadeau Photo, Minnesota Historical Society

A peat fire.

Fortunately there was plenty of water in the drainage ditches which meant that all the fires were close to water. The memory of the many peat problems I had seen at Deer River were fresh in my mind. I could see the relative ease with which these fires could be extinguished and could visualize the possible problems if the peat fires were left to burn. There was no question - they should be put out.

The ranger district had only two fire pumpers. Both, primarily for peat fires, were 1500 gallon per hour capacity Fairbanks-Morse typhoon pumps powered with 1 1/2 horse power, farm type, gasoline engines. Both the pump and the motor were mounted on four by four wooden timbers. Each unit weighed at least 400 pounds and was never intended to be carried but rather to be skidded. The Grand Rapids supply depot was only a year old and from there we were able to obtain a similar pumper and the necessary hose.



The fire pumps of 1931.

Ed arranged for three separate crews of four men each. One of the crew members needed to have a team of horses. The horses were necessary to get the equipment back to the fires as well as to move the pumps to new locations as the peat spots were extinguished. Within two days the three crews were working.

It was then that I wrote a letter to St. Paul. I outlined the extent of the fires, told what was being done in the way of suppression, and explained why I felt it was advisable to extinguish the fires. Two weeks passed before there was a response to my letter. Grover Conzet, the State Forester, questioned my judgement in deciding to expend money to put out peat fires. But he made no hint or suggestion that I discontinue the work.

Without making any changes relative to the action on this fire, I again wrote Conzet stating still further why I judged it best to continue. I concluded by saying that if he felt I should discontinue the expenditure of money, I would do so. Since

there was no response we continued for about two weeks when we were satisfied that all the burning peat spots had been extinguished. Then we prepared the labor vouchers as well as those covering the expenses for gasoline for the pumpers and the hiring of the teams of horses. The rate for a team of horses was 25 cents an hour. The total expense for the fire was slightly over \$1,300.00.

At that time it was normal to expect a month to pass before checks were processed and returned to the ranger district for distribution. The checks had not much more than arrived when Art Linder stopped at the ranger station. Art had the title of Field Inspector and was the only liaison between the St. Paul office and the field. Art had been the district ranger at Warroad and was familiar with field operations.

Following the normal greeting, Art's words to me were, "You are in big trouble with the Big Three." He was referring to the Executive Council which was made up of the Governor, the State Treasurer, and the State Auditor. This group had a reputation for carefully scrutinizing all expenditures and closely guarding state money. He went on to say my trouble with them was related to the excessively high fire fighting costs of the McGregor-Tamarack peat fires. My immediate response was, "First let me show you the correspondence relative to the situation," and retrieved the letters from the file.

After reading the three letters Art looked up and I said, "And I did not get an answer to the last letter." Art's response was, "You didn't expect Grove to hang his neck out and tell you not to put out peat fires, did you?" To this my reply was, "Apparently someone had the thought at this stage that I should have hung my neck out."

Our conversation continued relative to the unofficial policy of letting peat fires burn. Art related the instances when large sums of money (by the standards of the 1930's) had been saved by allowing similar peat fire situations to burn without control action. I was aware of what he was referring to, as the subject

had been discussed by some rangers at an informal evening gathering at a recent ranger meeting. I had been a good listener to the discussion and remembered the words of an older and wiser ranger. It was those words which prompted me to say, "Yes, and I understand some very good rangers had to be moved to other parts of the state because of the antagonism of local people after the fires escaped and caused some great personal losses." Yes, Art remembered the incidents. Despite this bantering of words, Art departed amiably without delivering further retribution.

That year was soon to develop into one of the worst summer fire years of many decades. I did not see Art for nearly six weeks. He came to my district because I was one of the rangers having real problems with one of the eight or ten fires then burning out of control, and each exceeding 10,000 acres in size. In discussing control measures relating to the large fire I had, I recalled the incident of expending \$1,300.00 - which had now become peanuts. I said to Art, "Where do you suppose we would be now if I had made the decision to leave those eleven miles of ditch dumps burning?" Art never answered me; he just looked at me and grinned.



The Holy Water Fire

There were several times during that August when the accumulated smoke from Minnesota and Ontario, Canada fires burning in peat soil and highland forest duff made visibility from lookout towers less than five miles. There were instances in various parts of the state when such conditions continued for as long as five consecutive days. Nevertheless, Minnesota's lookout towers were occupied with the expectation, or hope, that there might be a sudden clearing of the atmosphere. If such a clearing occurred, even for a few minutes, there was the possibility that an unknown wild fire might be detected.

It was on one of those days when the atmosphere cleared for a short period that a U.S. Forest Service lookout towerman at Remer got a glimpse of a smoke. The towerman quickly took a vernier reading of 92 degrees and estimated the smoke to be about twelve miles away. Within minutes his visibility was again reduced and he never saw the smoke again. No other lookout had seen the smoke so a cross reading, and a possible pinpointing of the location, was not possible. The estimated

distance placed the smoke in a roadless area where the U.S. Forest Service had a heavy concentration of land ownership.

After a great deal of ground searching with no results, the U.S. rangers limited their search to following the tower reading to the east boundary of the Chippewa National Forest. It was there they met a strong and distinct smell of smoke. The search crew knew that they must be very near a fire even though they were at the boundary of their jurisdiction. They continued and in less than a mile came to the fire. In view of the conditions, the towerman had been very accurate in the sighting of the smoke and had been only a couple of miles off in his estimate of distance.

That evening I received a telephone call advising me of the fire, which was in my district and unknown to me. The U.S. ranger advised that it was about three acres in size, nearly all smoldering in leaf litter and forest duff but not in peat soil. He said it was on the east side of a small lake in section 3, township 52, range 27.

The lake he referred to had come by its name through an unusual circumstance. The fifty or sixty acre lake had not been meandered since no part of it had been touched by a section line at the time of the original government land survey. That general area had been divested of its original stand of pine timber about the beginning of the century. Through some sort of an early land trade, a nonresident had acquired the 160 acres in which this small lake was located. After paying land taxes for a number of years, he came to the area and hired a land cruiser to take him the property so he might see firsthand how well his money had been invested. It was then that he learned he had been paying taxes on sixty acres of water and some very inaccessible land not timbered with valuable pine as he had been led to believe. In disgust he deeded the property to the Catholic Church and the body of water became known as Holy Water Lake.

Early the following morning patrolman Noble Nesseth and two experienced fire fighters, Austin Perry and Nick Kortekaas,



Control was not easy.

left to see how best to deal with the fire. They had to walk in three miles from the nearest road, carrying a couple of shovels, an axe, a pump tank, a pail, some blankets, and a few groceries. Noble returned that night after he had decided what suppression action was needed. Perry and Kortekaas remained to make certain the fire did not spread.

Since the entire fire area was burning in either forest litter or old tree stumps and logs, Noble determined that the only way to make it safe was to put it out with water. On the way into the fire they had come upon an early logging road and followed it nearly to the fire. On the way out, Noble had followed it to a road and found that while it was not driveable with a motor vehicle, it could be used by a team of horses and a wagon. This would make it possible to deliver pumping equipment and camp supplies. The only pumper in the district that was immediately available was a 1500 gallon capacity Fairbanks-Morse. At least two more men would be needed as well as hand tools, tents and other supplies for the camp.

All the necessary arrangements were made that night before we left the office. Elmer Wharton had a team of horses and a wagon and was agreeable to spending a week away from home and sleeping on the ground. Two more fire fighters were found. Equipment to put out the fire and to establish a fire camp was collected. Elmer would bring the hay and feed for his team of horses. A grocery list was made up and food obtained to take care of the men for a week.

At daylight the following morning the two extra fire fighters were taken to where they could start clearing out the old logging road. Soon after that time Elmer was there to load all the supplies. Noble went along to make certain everything went according to plan. The tents had to be put up, the pumper situated and the men instructed. Perry was left as fire and camp boss. When Noble returned late that evening, he was satisfied that the men would be taken care of and the fire effectively managed.

The hot, dry weather continued and new fires occurred daily. The Holy Water Lake fire was just another fire in the back of our minds which we were certain was being handled properly. On the sixth day Nick came walking in with a pack-sack on his back. The Holy Water fire crew was nearly out of food, and there still was work to be done, but he was certain the fire had been corralled. Each morning before sunrise, when there was dampness in the air, the crew patrolled the fire area. And each morning they found smoldering spots where they had been certain the fire was out. These spots needed to be wetted down or dug out and then watched. Even though there were fewer such spots each successive morning, they were told to stay one additional day after the last fire spot was put out.

We felt fortunate that there were men available whose first concern was fire control. Sleeping on the ground and cooking one's food over an open fire in the blowing ashes and smoke is not an attractive way to live. Dipping their drinking water out a lake after their water supply ran out was really not healthy.

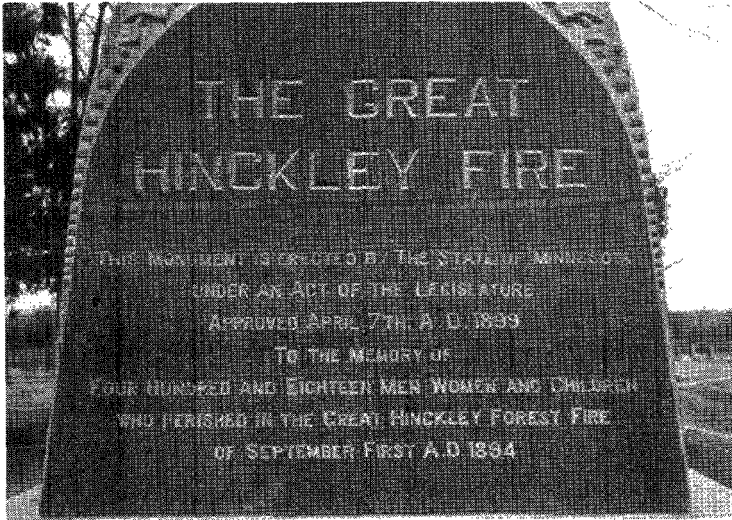
Certainly they were not there, under those conditions, for the 25 cents an hour they were being paid.



Township Fire Wardens

The Hinckley forest fire, which burned in September 1894 with the loss of 418 human lives, emphasized the need for improved forest fire protection in Minnesota. At the following legislative session, an act was passed with an appropriation of slightly over \$2,000.00. That amount of money was to pay the salary of the chief fire warden, allow him some expense provisions and provide fire protection for more than twenty million acres of forest land.

Determined to meet this tremendous challenge, General C.C. Andrews, the newly appointed chief fire warden, recruited more than one thousand dedicated individuals throughout the forested portion of the state that first year to act as volunteer township fire wardens. This group was the only organized protection force for the next seventeen years. By the time the first Minnesota Forest Service ranger force was initiated in 1911, the volunteer township fire warden system had proven itself so valuable it was continued as an essential and important part of the new organization. Sixty years later when forest protection



The Hinckley Monument

had become much more intensified, the township fire wardens were still considered to be a necessary part of the operation.

In nearly all instances township fire wardens were recognized community leaders and many were appointed because of this qualification. They often came in from the fields or left other work to write burning permits. This was generally the clue for their wives to make coffee and serve cookies. This pause allowed them to give a fire prevention safety message along with the permits to burn. Often they would sense the local dry conditions and persuade the neighbor to delay the burning until after the next rain. A township fire warden in the early years was paid only when actually engaged in fire suppression work. Numerous times they left their work to merely check on a neighborhood smoke to make certain it was not an unauthorized fire. They truly were dedicated individuals.

Don Tilden was such a township fire warden who lived near Cow Horn Lake. Don was a part time farmer, logger, timber

scaler and sometimes a fur trapper. His father was considered locally to be one of the outstanding conservationists of that period and Don had been well indoctrinated.

On a warm dry August morning Don decided he would hike into an isolated area and determine the fall fur trapping probabilities. He carried no lunch as he fully expected to be back before the noon hour. After all he was only going to walk three or four miles into this roadless area. The only thing he carried was his hunting knife and that only because it was always in the leather sheath attached to his belt.

He was nearly as far as he intended to go when he caught a faint smell of smoke. Because he was a woodsman, he immediately recognized it as being wood or grass smoke. He stood for several minutes and on the faint breeze came another whiff of smoke. He noted the wind direction and walked slowly into it knowing now that there was some sort of fire not far away. Within 200 feet he came to a fire. It was burning so slowly that only occasionally and faintly did the smoke rise to the tree tops.

Don went around the burning area and estimated that it was only about a quarter acre in size. Near the center he saw a large white pine with the bark shattered in a streak down one side from top to bottom. He recalled the severe dry lightning storm three nights previously and was certain this had been the cause of the fire. The wind, which had been nearly calm only minutes before, was now an increasing and drying southwest wind.

Don's first impulse was to go for help, but as he thought about it he knew that was not the thing to do. With the threatening weather conditions, by the time he ran four miles, alerted neighbors for assistance, called the ranger station and returned to the fire area with men and tools, the fire could well become a raging inferno. He decided the only thing to do was to stay and try to deal with the problem all alone. If he was successful the smoke might never rise high enough to be seen by the lookout tower.

He first cut a five foot tall jack pine sapling. With it he beat out the flames at the fire's edge. By the time he was completely around the fire he had worn out two more saplings. But then he determined the wind velocity had increased to a nearly steady ten miles an hour and again he needed to circle the fire and beat out the flames which had been brought to life from wind fanned embers. With the increasing wind he now was not so certain he could keep the fire from escaping.

He needed to deal with the head of the fire first so he went to the windward side with his hunting knife. Breathing mostly smoke, he began digging a narrow trench through the dry forest litter and down to mineral soil. As he dug he kept careful watch and when he could see flames occurring anywhere on the fire's edge, he hurried to beat them out with a sapling. How he longed for just one drink of water. He eventually needed to cut one more sapling. This was becoming more difficult as his knife had become quite dull from digging the trench.

After what seemed like hours of alternately digging at the trench and flaying the newly developed flames, he completed the narrow trench across the windward side of the fire. By stages he worked each side back. Now he was almost always out of the smoke except for the few minutes when he had to walk around the front of the fire to be certain no sparks had blown over his trench and started new fires. Eventually he completed the trench entirely around the fire and could relax somewhat. All the while he had been thinking about the abundance of water in Cook Lake but he had no way to carry it to the fire. After a complete turn around the fire area, he hurried to the lake where he finally had his refreshing drink and was able to wash the grime off his face and hands. For the first time he looked at his watch. It was nearly five o'clock.

He hurried back to the fire and even though he had been gone less than a half hour, he found that blown embers had carried across his meager line and started three separate spot fires. Two of them were so small he was able to gather the forest

litter around them in his cupped hands and carry them back into the burned area. The third spot was larger and after beating out the flames he was forced to dig a trench around that small area. He now knew for certain that in order to save his day's work he would need to stay until the wind subsided.

It was sundown before the wind diminished to a slight breeze and he felt that the fire was safe to leave. With the long Minnesota twilight, it was easy to make his way nearly four miles to where he left his car that morning.

It was after ten o'clock that evening when Don called me. With no details he told me that he had come upon a small fire that day near Cook Lake. He said he already had some men lined up and would go back in the morning and take care of it. Knowing Don's abilities and with other fires going, I put this one out of my mind.

Days later, after that critical fire period had abated somewhat, I learned all the details. Don was paid the fire foreman wage of 35 cents and hour for his action and services. As the years passed, I, and many others, became more aware of the similar acts which had been carried out by township fire wardens. Their unselfish dedication to forest fire prevention and suppression over much more than half a century has played a large and important part in the preservation of Minnesota's forests.



2,264 State Fire Wardens were commissioned in 1985.

\$7.95

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