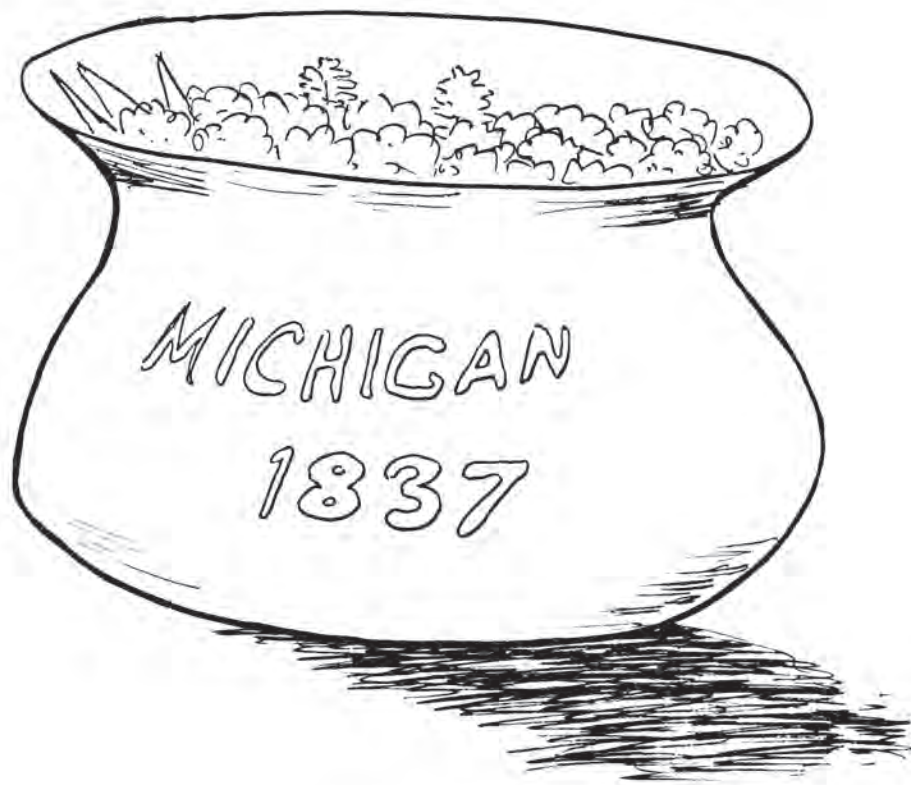


GREEN GOLD: Michigan Forest History



by

William B. Botti

Michigan Forest Association

PREFACE

This book was conceived in my Michigan Department of Natural Resources office in Lansing some time in 1987, Michigan's Sesquicentennial year. I had been talking to a school teacher who was searching for materials to help her teach a Michigan history unit on forest resources. Further discussion revealed she, herself, while highly motivated had a rather limited understanding of forest history. At the conclusion of the conversation I vowed to myself to develop something that would attempt to fill this gap. The idea of a coloring book materialized soon after.

You can find more scholarly works on Michigan history and better descriptions of the early logging, some of them are listed in the back of this book. What I've attempted here is to not only show what was, but also how that relates to what is and how and why things happened the way they did. It is my hope that the readers will come away feeling a little more comfortable with what's happening in the forest in some places and a little more concerned with what's happening in others.

Many friends from Michigan Forest Association, Department of Natural Resources, and family have made a substantial contribution by reading and criticizing both text and artwork. Perhaps most notable among these were John and Joni VanDyke and Lynn W. Day of Michigan Forest Association and Wanda B. Stevens of Department of Natural Resources. These and many others will find their comments incorporated herein. My thanks to all of them, and especially to that nameless teacher to whom the book is dedicated.

DEDICATION

To The Unknown Teacher Who Phoned
For Help and Couldn't Find It.

A publication of
Michigan Forest
Association



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...a non-profit statewide organization with in-depth involvement in the political, scientific and social aspects of forestry. It is the voice of forestry and resource stewardship in Michigan.

Funds for publication and some free distribution to students were made possible by grants from the Weyerhaeuser Company Foundation and by the Michigan Forest Foundation, Inc. through donations made in memory of Paul E. Dake. Other current and past contributors to the Green Gold, Michigan Forest History video and booklet program include AJD Forest Products, Benson Forests (now Shelter Bay Forests), Champion International Corp., Devereaux Sawmills, Inc., Georgia-Pacific Corp., Lake Superior Land Co., Louisiana-Pacific Corp., Mead Publishing Paper, Michigan Association of Timbermen, Michigan Forest Resource Alliance, Nagel Lumber Co., Neenah Paper Division of Kimberly-Clark Corp., Pine River Lumber Co., S. D. Warren Co., Stone Container Corp., Timber Products Michigan, and private individuals.

BLACK LINE MASTERS FOR TEACHERS

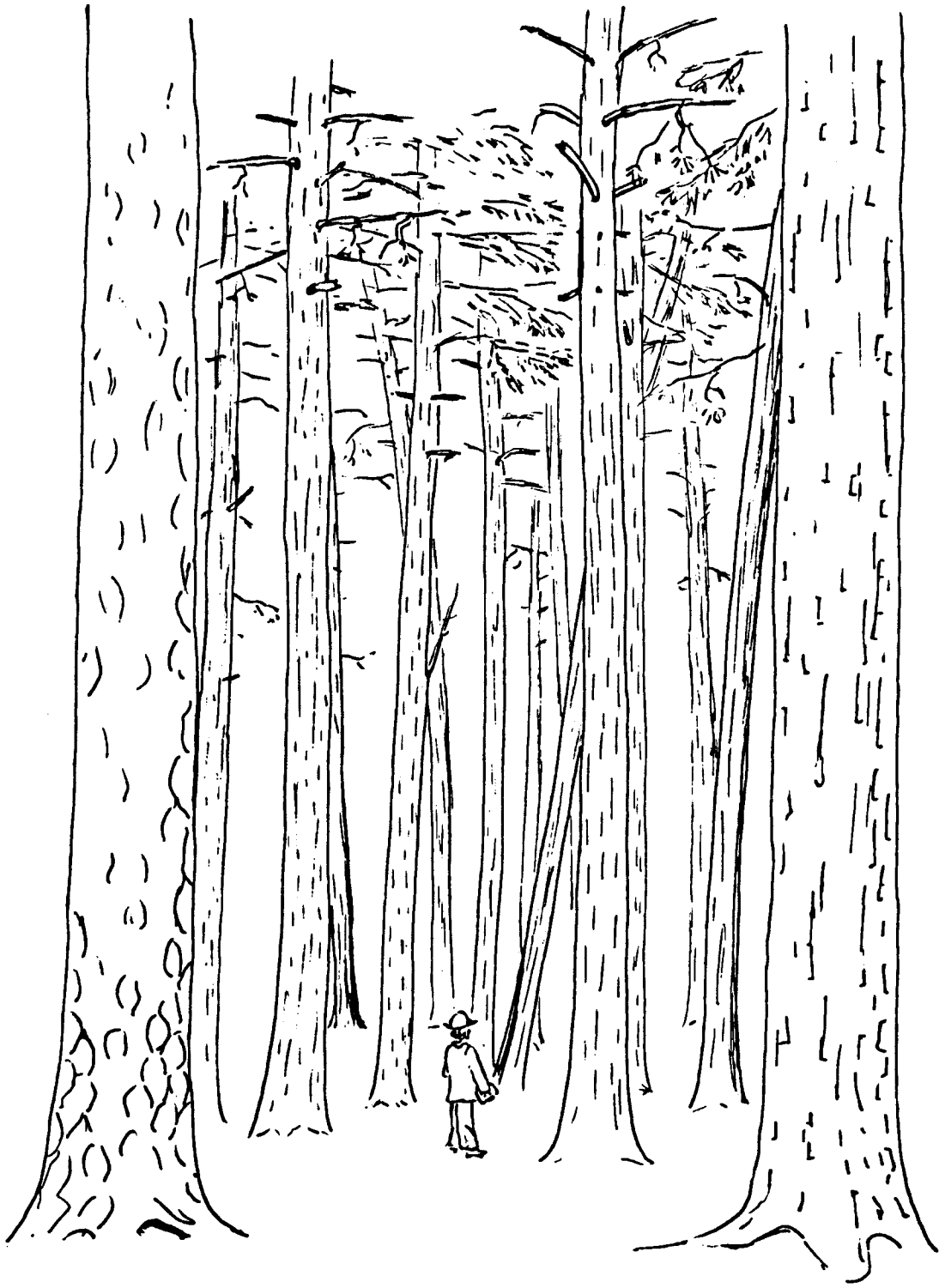
The author and the publisher encourage the use of this book in the classroom in studies of Michigan history, geography and natural resources. Teachers see back cover for an indication of how this booklet provides information to meet the Michigan Late Elementary Guidelines for Social Studies.

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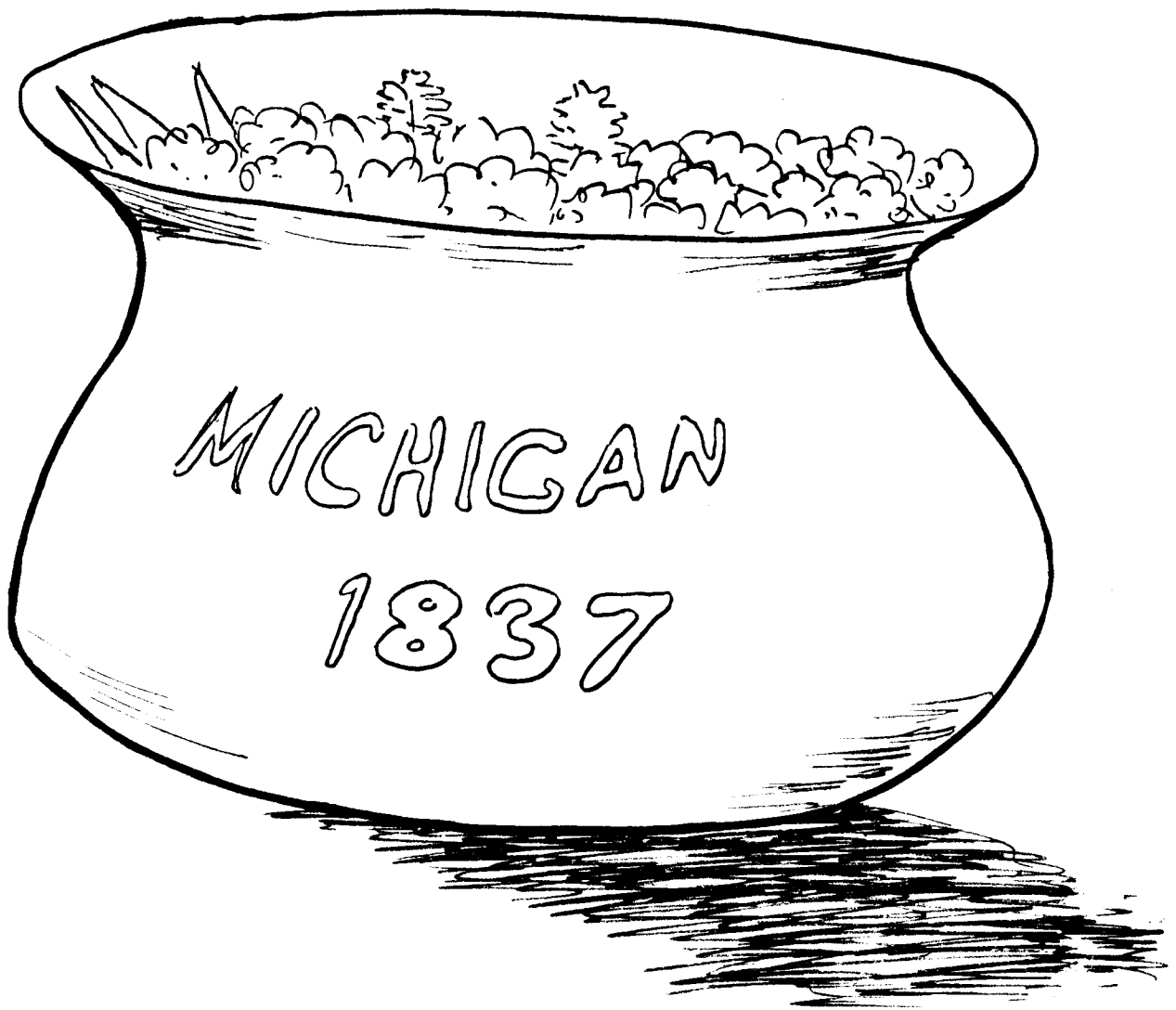
THE GLACIERS

The beginnings of Michigan's forests took place about 12,000 years ago when the last glaciers melted. The land must have looked like a huge gravel pile. Probably the first trees were aspens and cottonwoods because their seeds travel long distances on the wind.



EARLY FORESTS

When the first Europeans came to what is now Michigan, most of the area was covered with timber. Vast tracts of pine were found in the northern parts of the territory.



GREEN GOLD

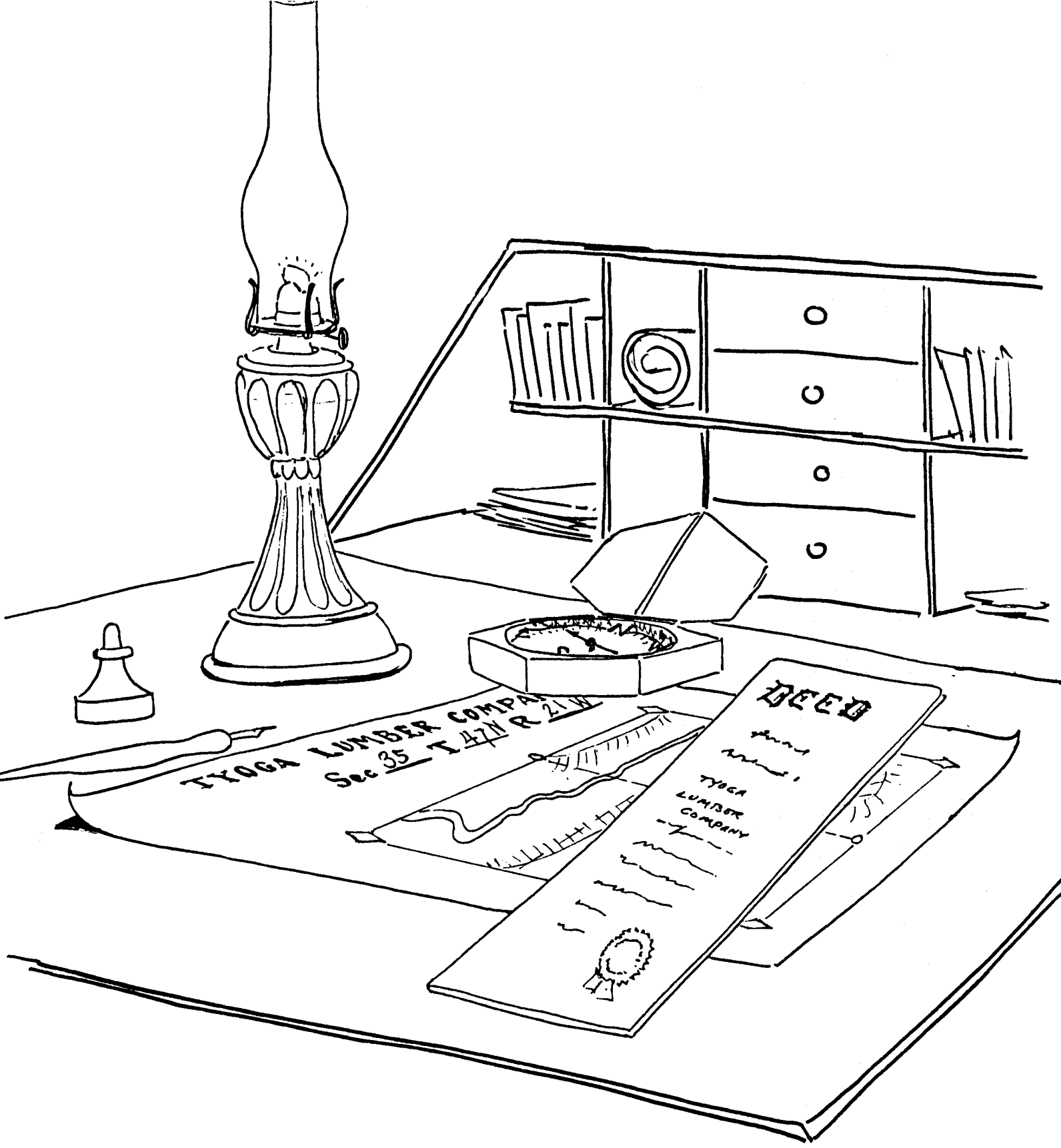
When Michigan became a state in 1837, about 95% of it was covered with forest. This forest would soon provide lumber to a growing nation. The pine forests had an incredible value. It was as if Michigan was a huge pot 95% full of green gold.



LANDLOOKERS

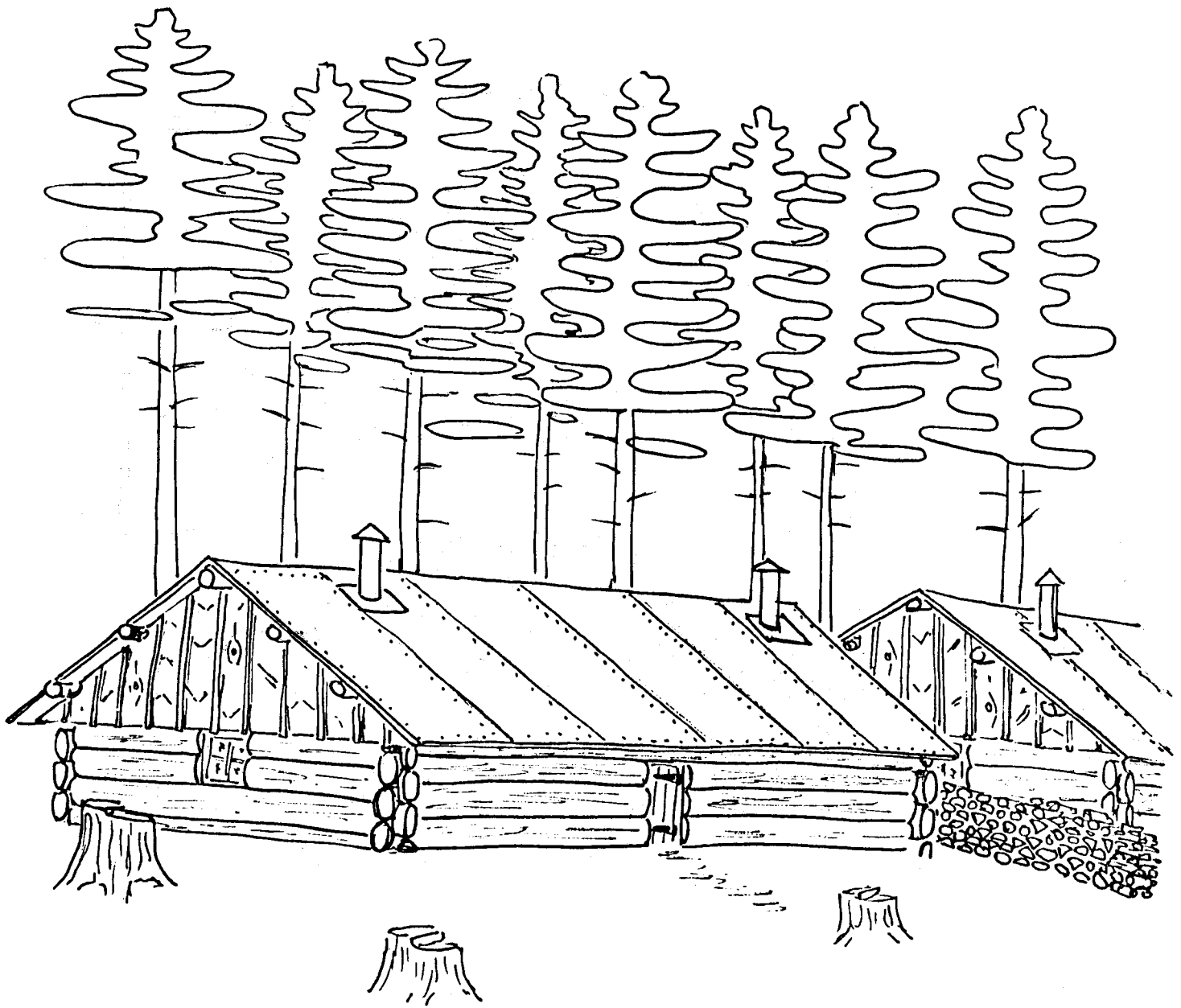
When the forests of Pennsylvania and the other eastern states were largely depleted, investors turned to Michigan for a continued supply of pine. They hired "landlookers" to explore the State and to file claims on lands that had good timber and a river nearby for transporting the logs.

Pictured is a landlooker from about 1870.



CLAIMS AND DEEDS

The landlookers mapped the forests and estimated the volume of timber. Their employers then filed claims to the best tracts at the Government Land Office in Detroit.



LOGGING CAMP

Once the lands had been purchased the new owners built groups of buildings called "camps" for their employees to live in while they were cutting the pines. A camp had bunkhouses for the workers, stables for the horses, a kitchen and dining room or mess hall, blacksmith shop and other buildings. They were built of logs cut from the woods around the camp.



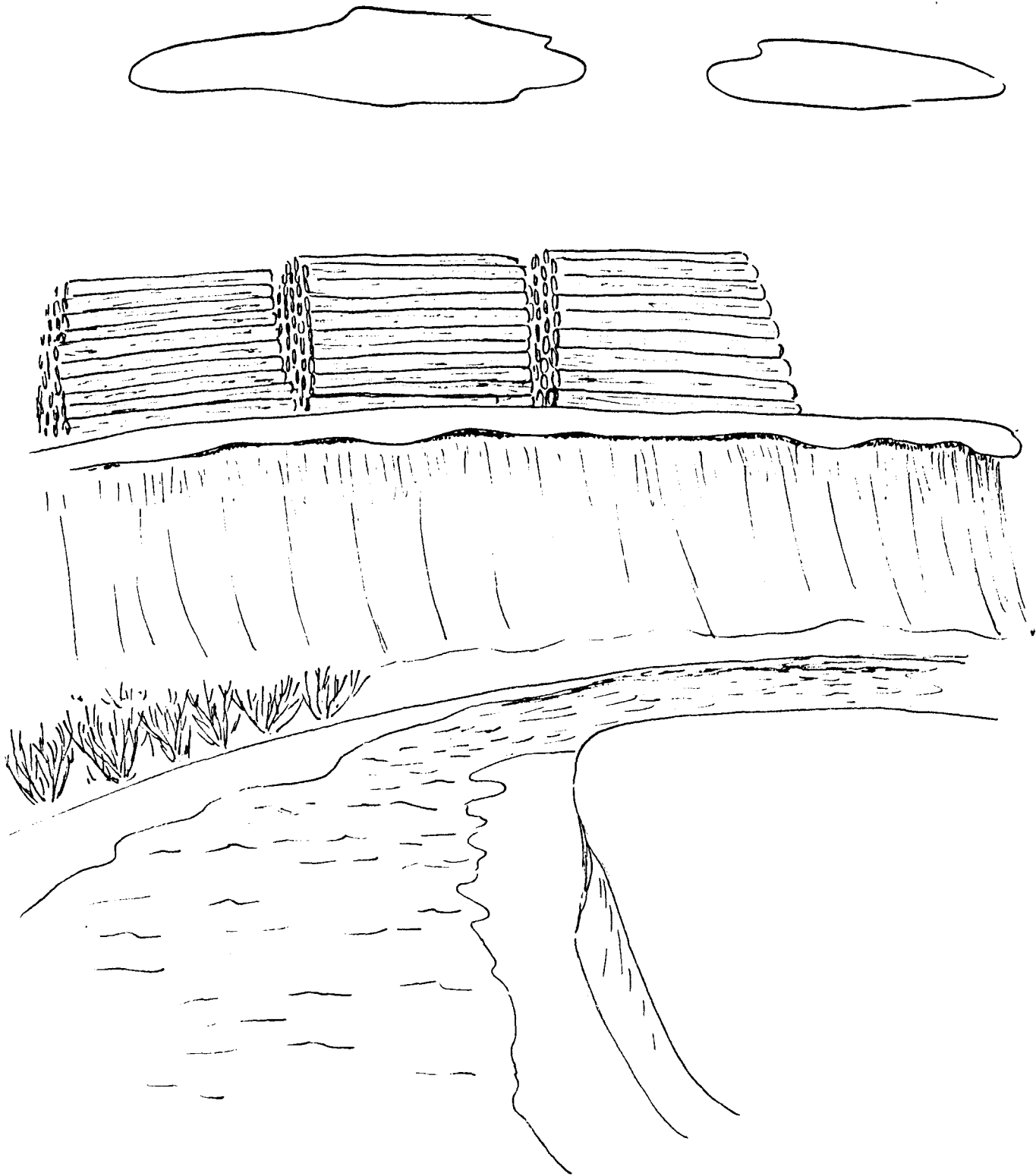
CROSSCUT SAW

Sawyers worked with two-man crosscut saws to cut the trees down and then cut them into logs.



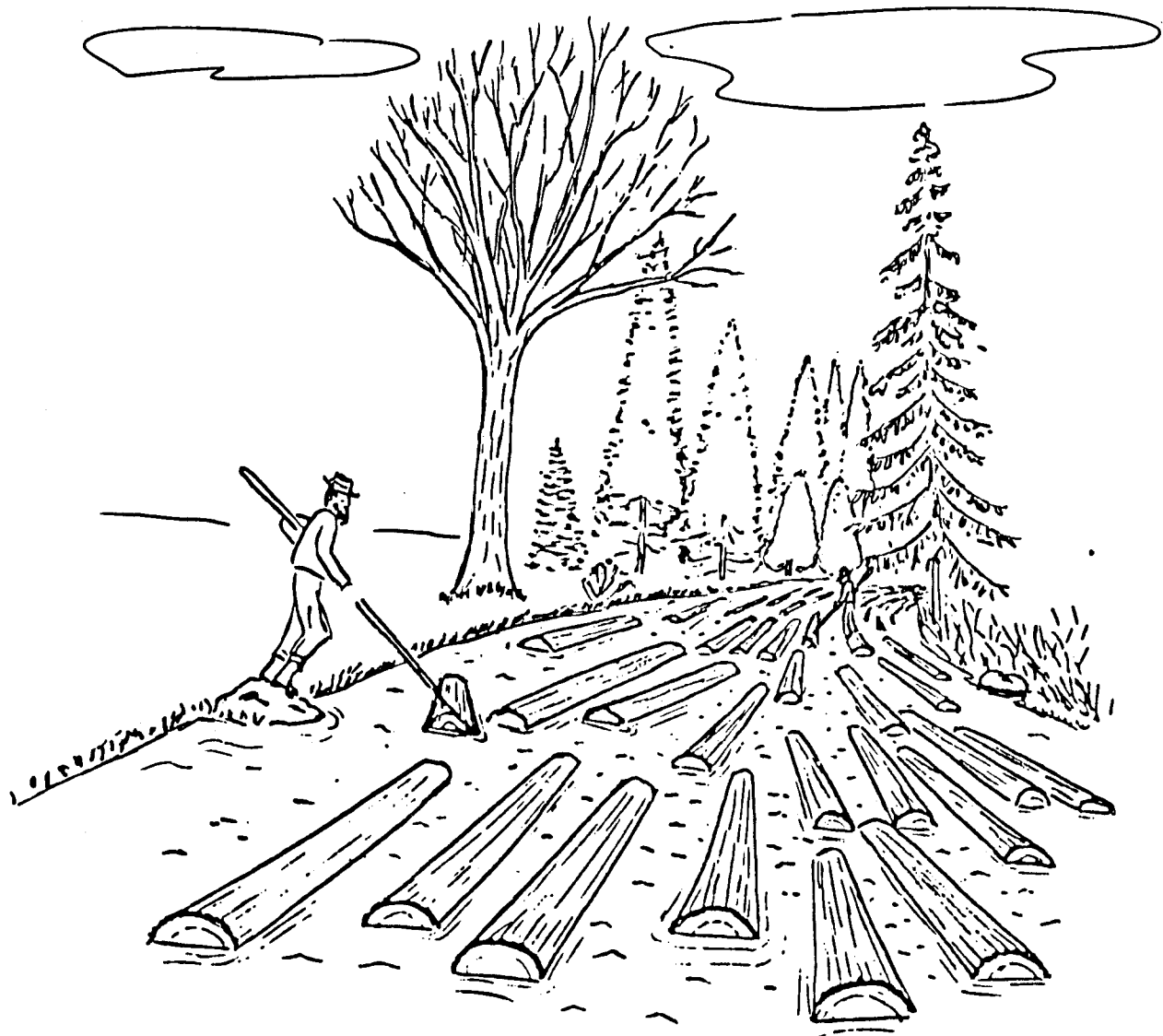
SKIDDING

The logs were dragged, or "skidded" out of the woods by horses or oxen. This was done in the winter so the logs would slide easily on the ice and snow.



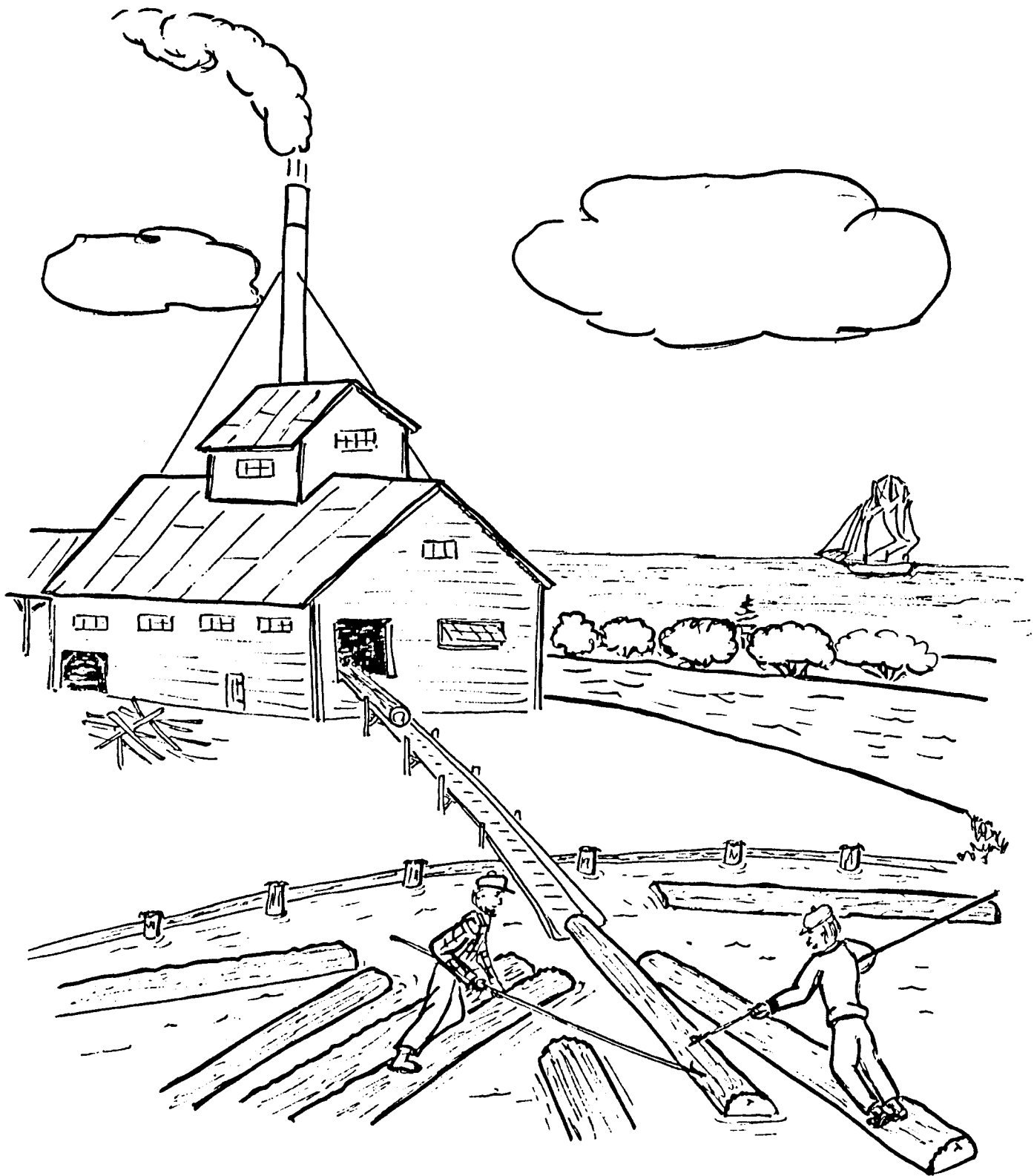
LOG LANDINGS

Logs were piled on landings along the rivers in the early days, where they could be rolled into the river in the spring.



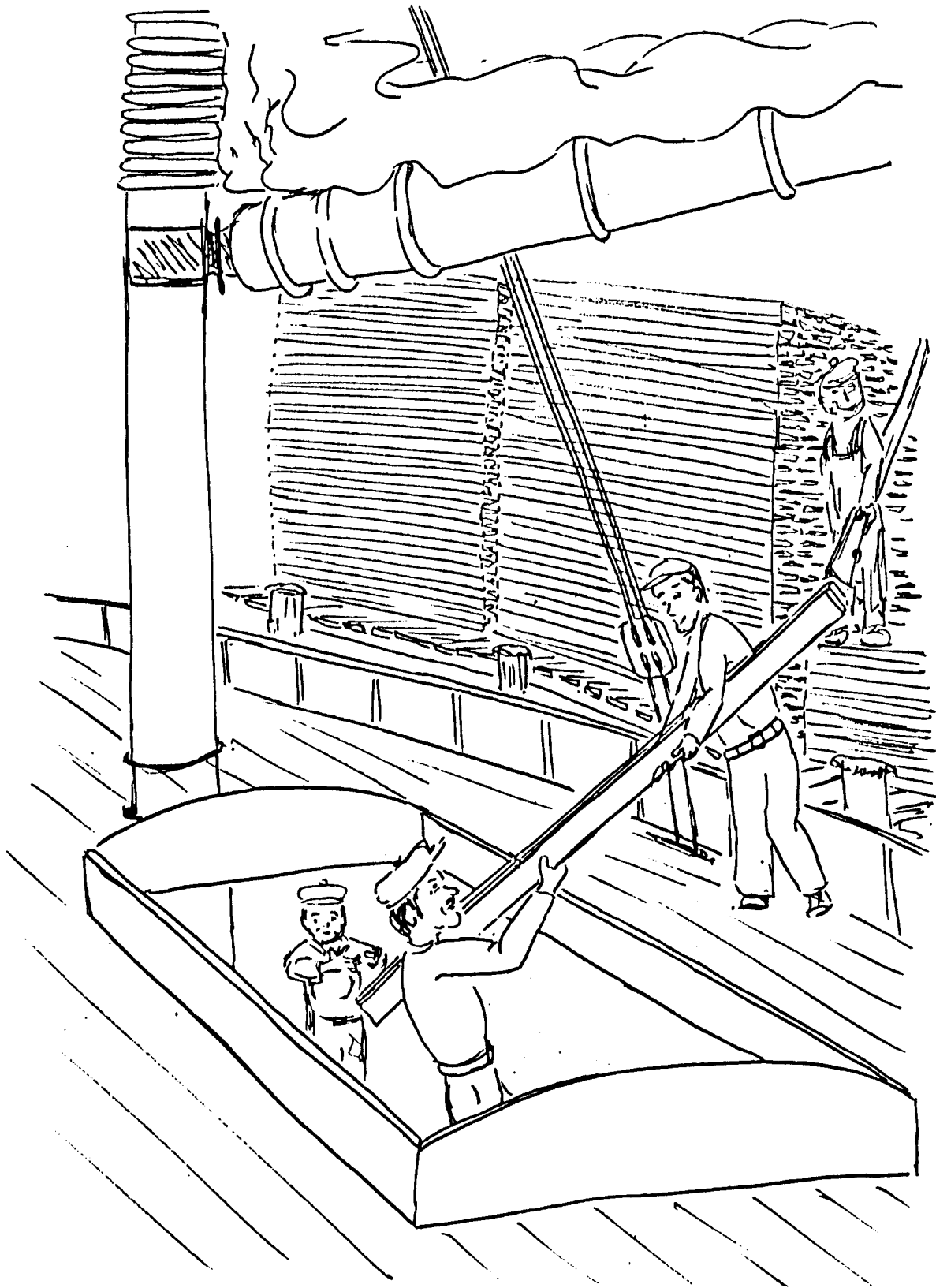
RIVER DRIVES

When the rivers and streams were high with water from the melting snow, the logs were rolled in and floated down stream. Men with "pike poles" had to follow the logs and keep them moving to avoid log jams.



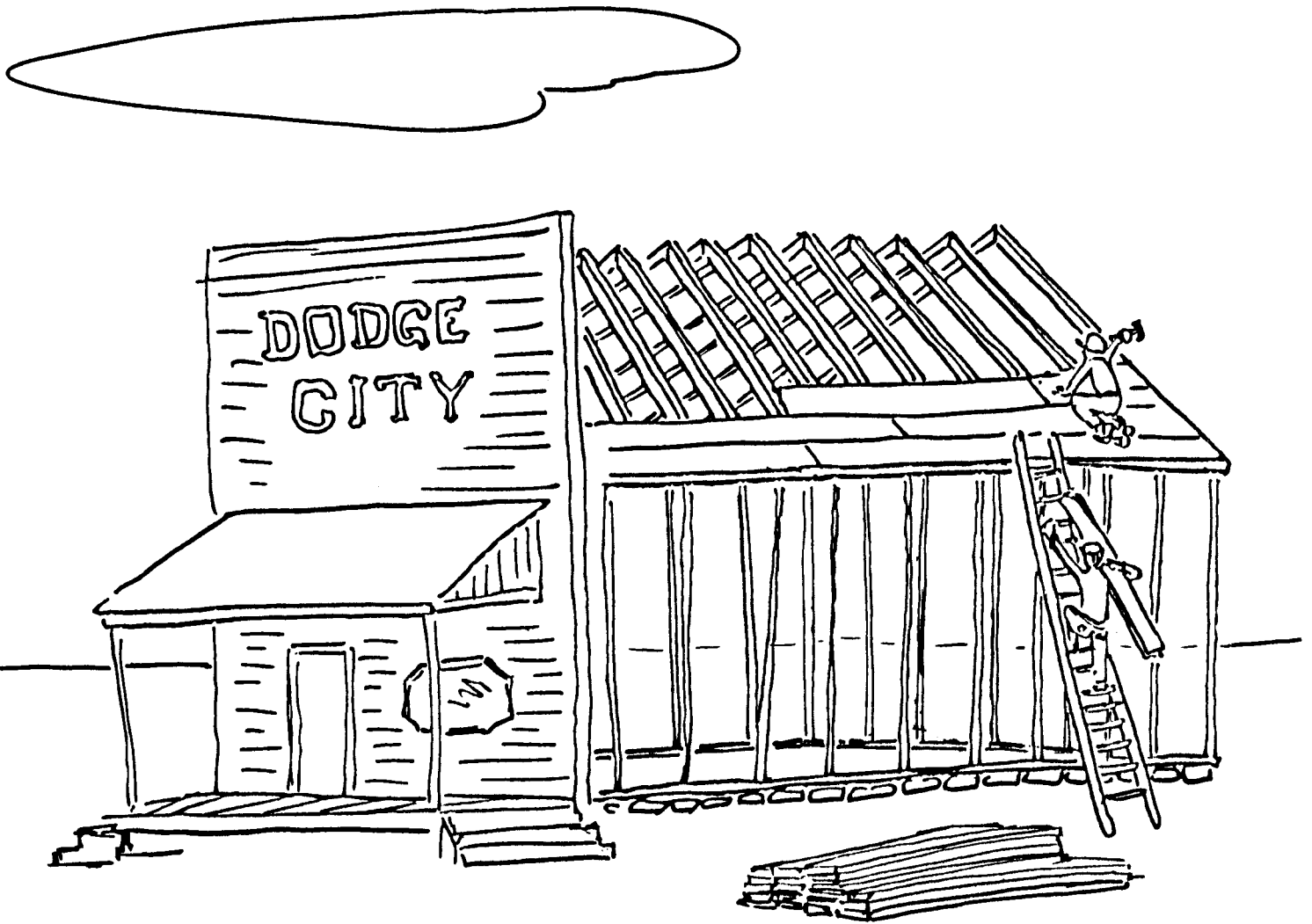
SAWMILLS

Sawmills were built along the rivers where they could be reached by Great Lakes sailing ships. Sawmills cut the logs into lumber. Many Michigan cities, such as Grand Rapids, Muskegon, Manistee, Saginaw and Bay City grew up around sawmills.



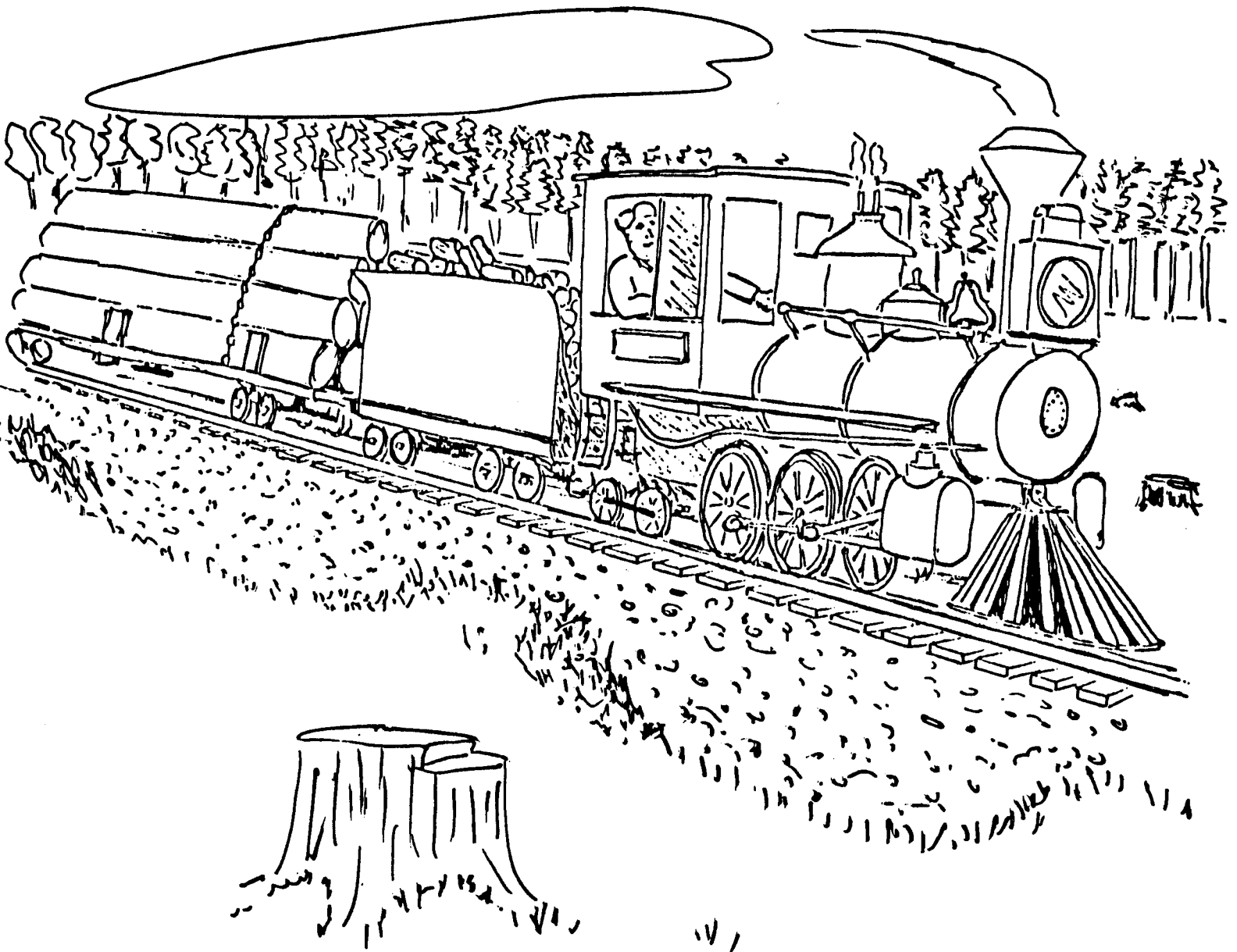
TRANSPORTING LUMBER

Lumber was loaded on sailing ships and carried to Chicago and other port cities.



MOVING WEST

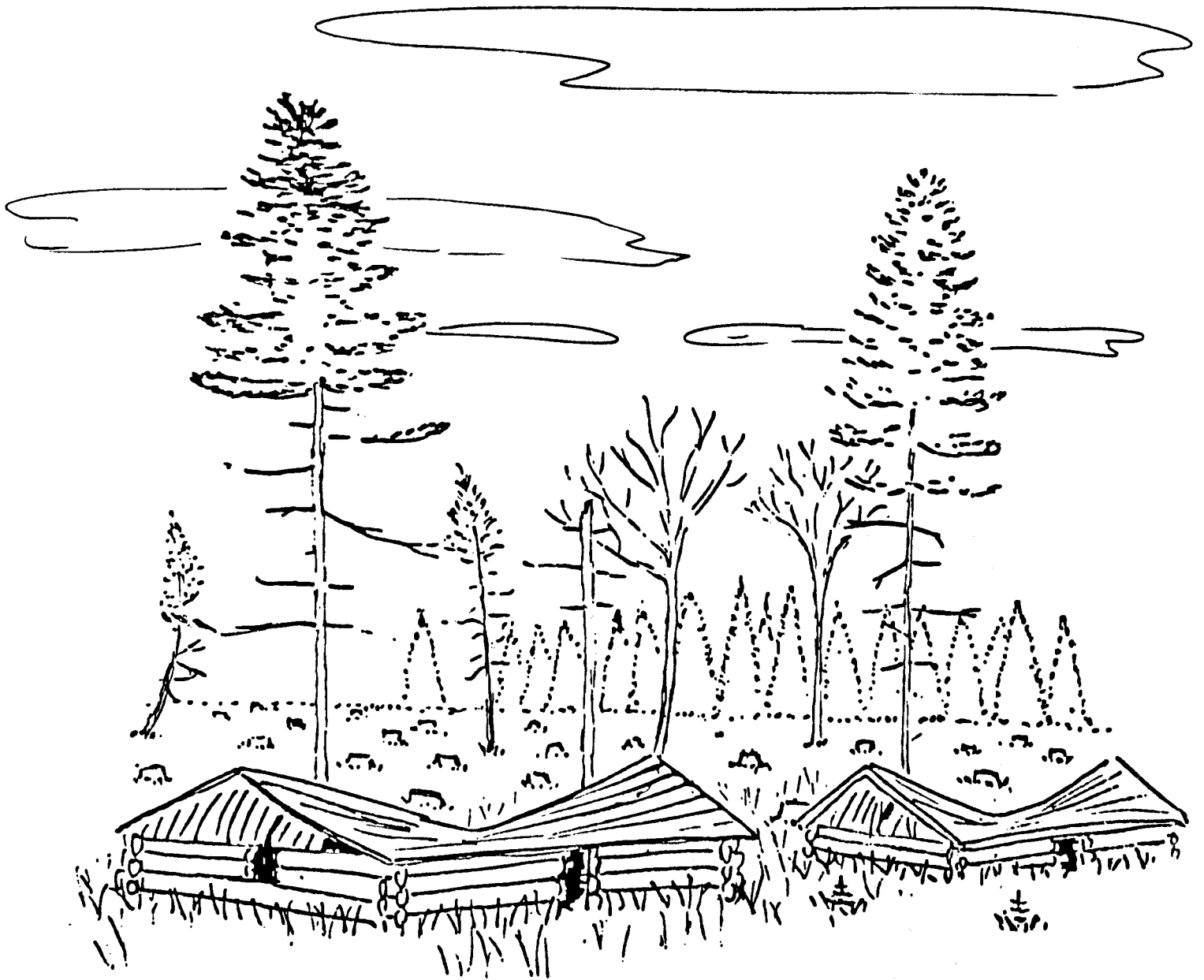
Much Michigan lumber was shipped to pioneer farm communities and cow towns such as we see in the movies. This was necessary because there were no forests in those areas.



LOGGING RAILROADS

After the first few years of logging, the pine along the rivers had been cut. The pine that was left was too far from the rivers to be floated to the mills.

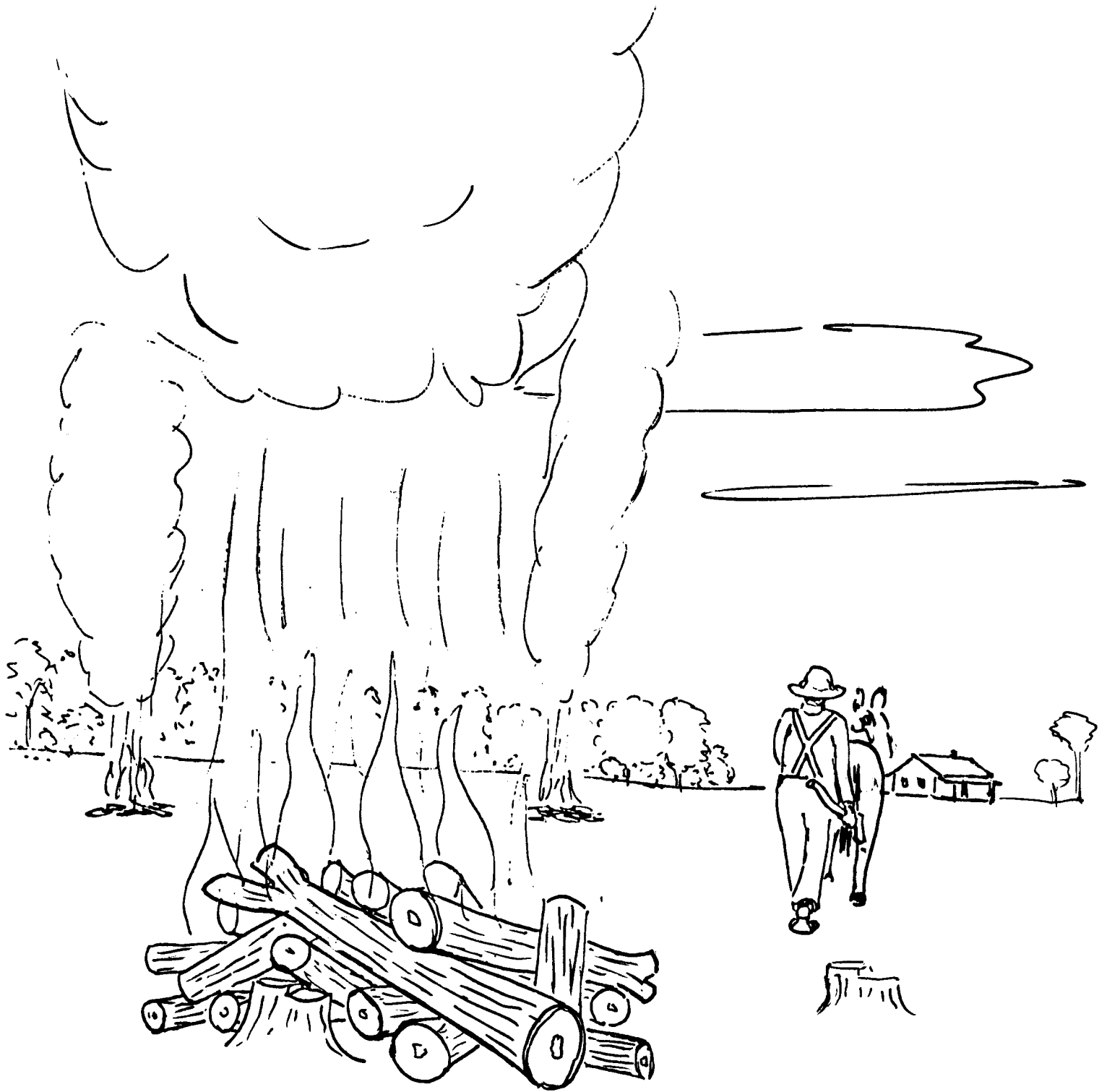
Special railroads were built into the woods to bring the logs to the mills. This also made it possible to ship logs all year.



ABANDONED CAMPS

A logging camp was used only as long as there was timber to cut close by. When the nearby timber was gone, the camps were abandoned. The loggers moved on to new areas.

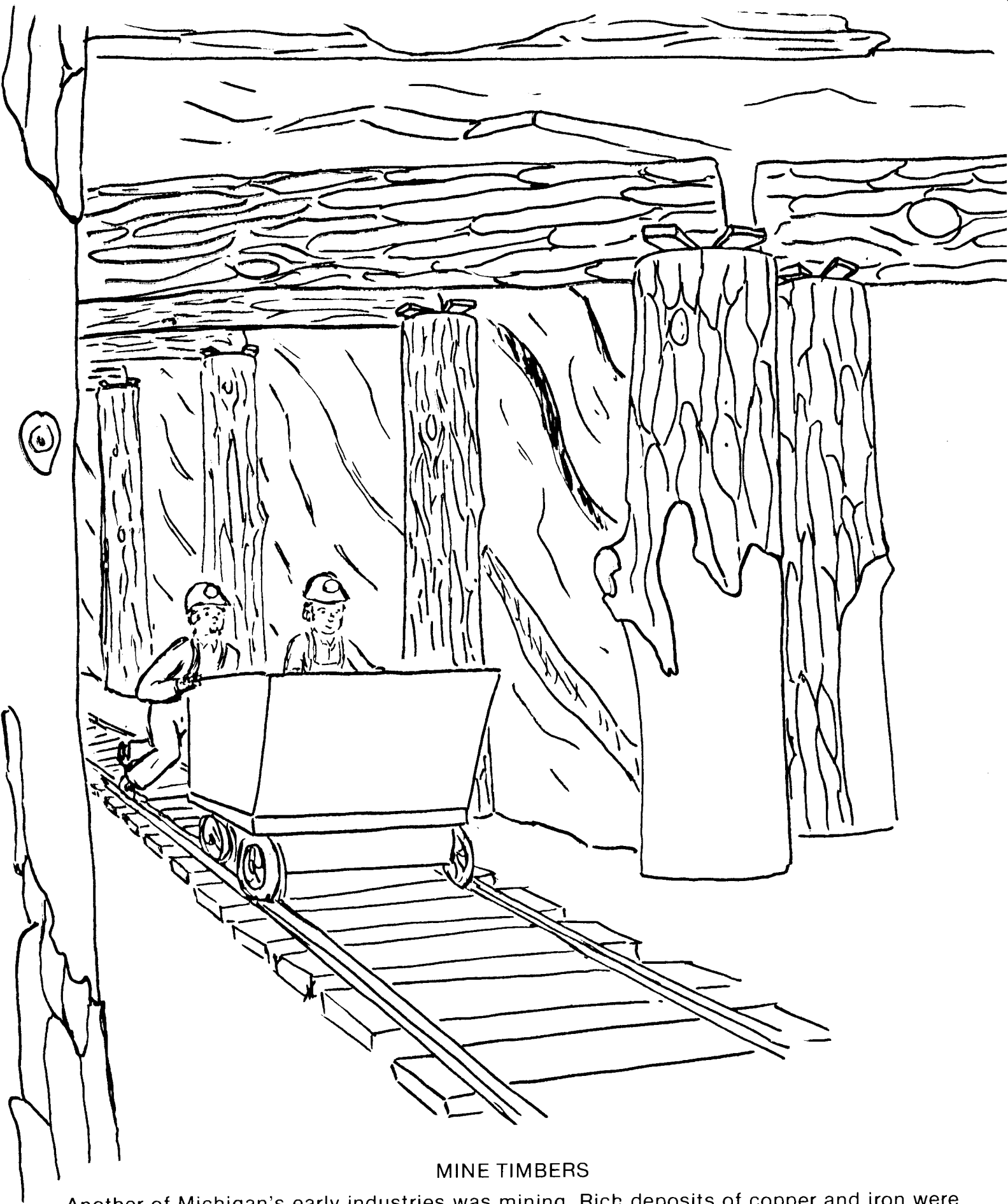
Ruins of the old camps can still be found in northern Michigan.



CLEARING FARMS

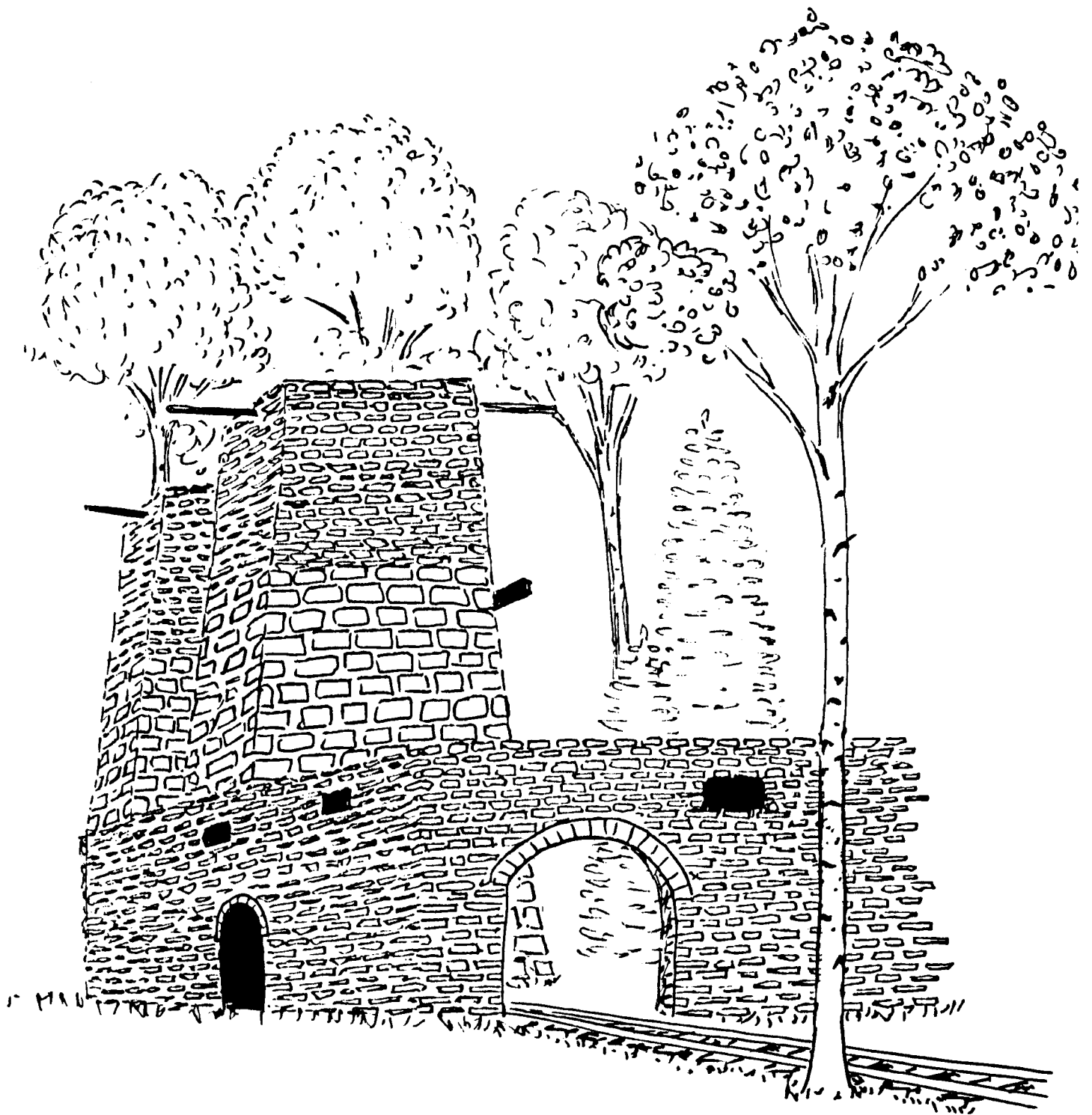
While logging was going on in the North, land was being cleared in southern Michigan for farming. Farmers cut the hardwood forest and used what trees they could for construction of houses, barns and other buildings. This used only a small portion of the wood available. Most of this was oak and other hardwoods which few people wanted.

To get it off the land for farming, much of the hardwood timber was piled and burned.



MINE TIMBERS

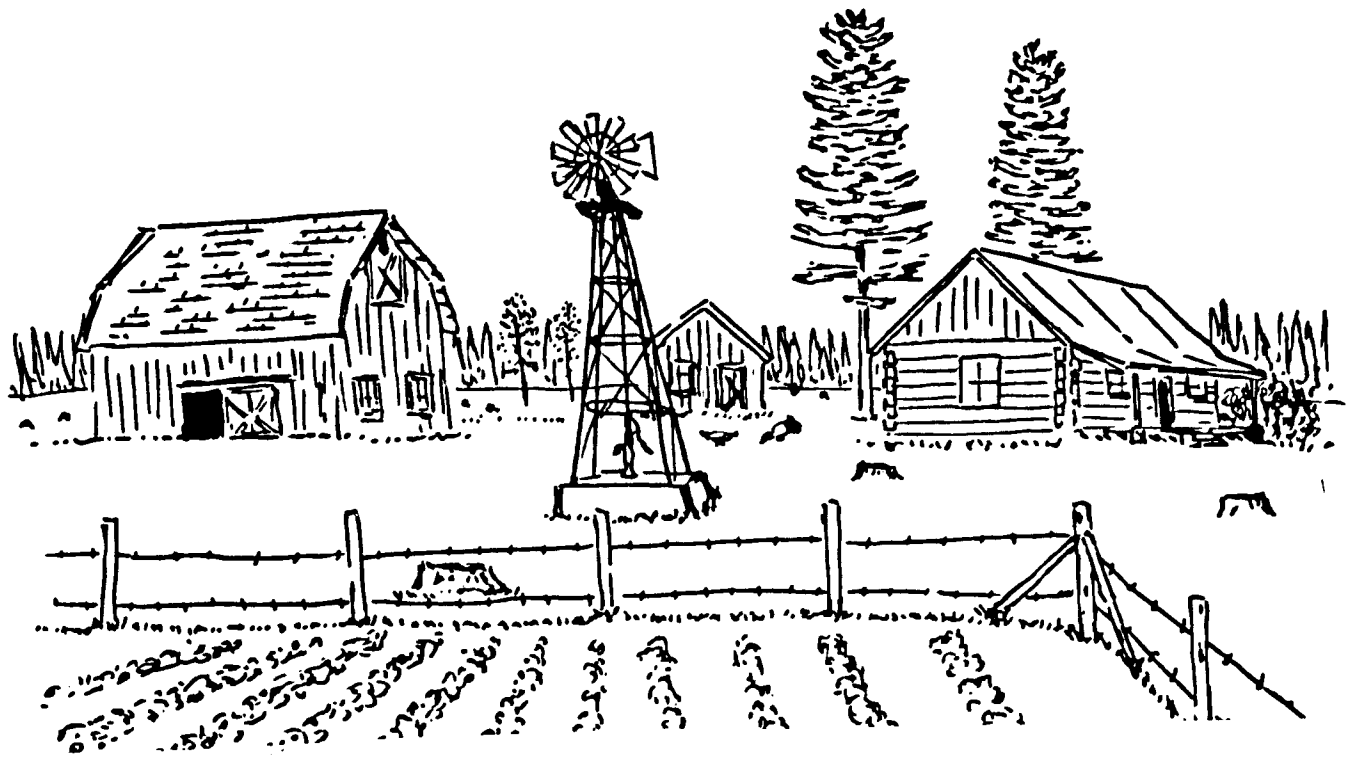
Another of Michigan's early industries was mining. Rich deposits of copper and iron were found in the western Upper Peninsula. Large amounts of timber were needed to prop up the mine tunnels to prevent cave-ins.



IRON SMELTING

Michigan's iron mining industry was coming into full swing as the pine was being cut. The iron ore was transported to where supplies of hardwood for charcoal and limestone, both needed for smelting, could be found. Blast furnaces like the one pictured could be found across the eastern Upper Peninsula. There also were some in the northern Lower Peninsula.

Gradually the hardwoods were cut from these areas. Much of the volume cut was converted to charcoal for iron smelting.



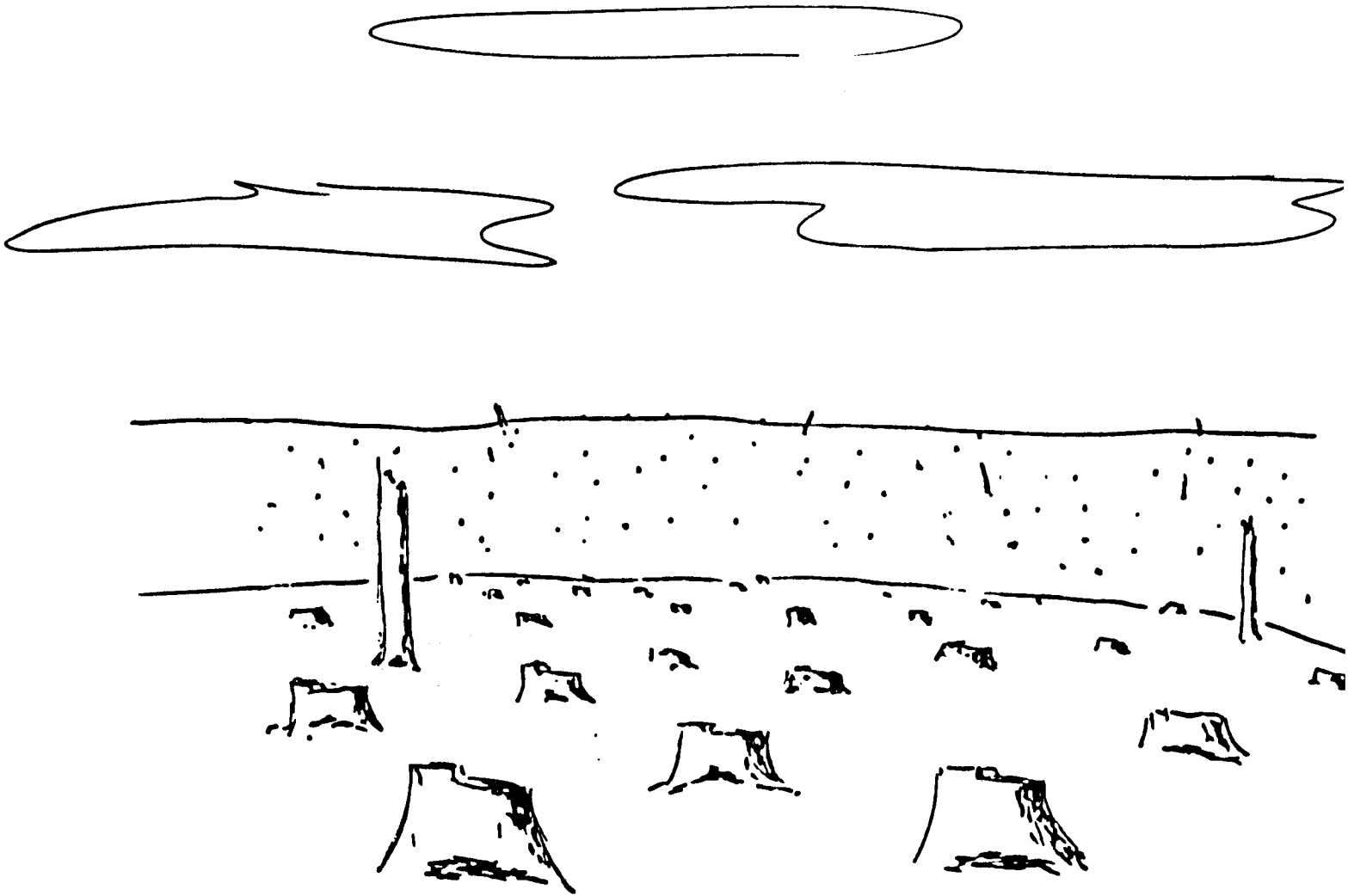
NORTHERN FARMS

Much of the land that had been cleared by logging in the North was converted to farms. Here, as well as in southern Michigan, stumps and unusable wood were piled and burned. In spite of all the hard work that went into the building of these farms, many would soon be abandoned.



FIRES

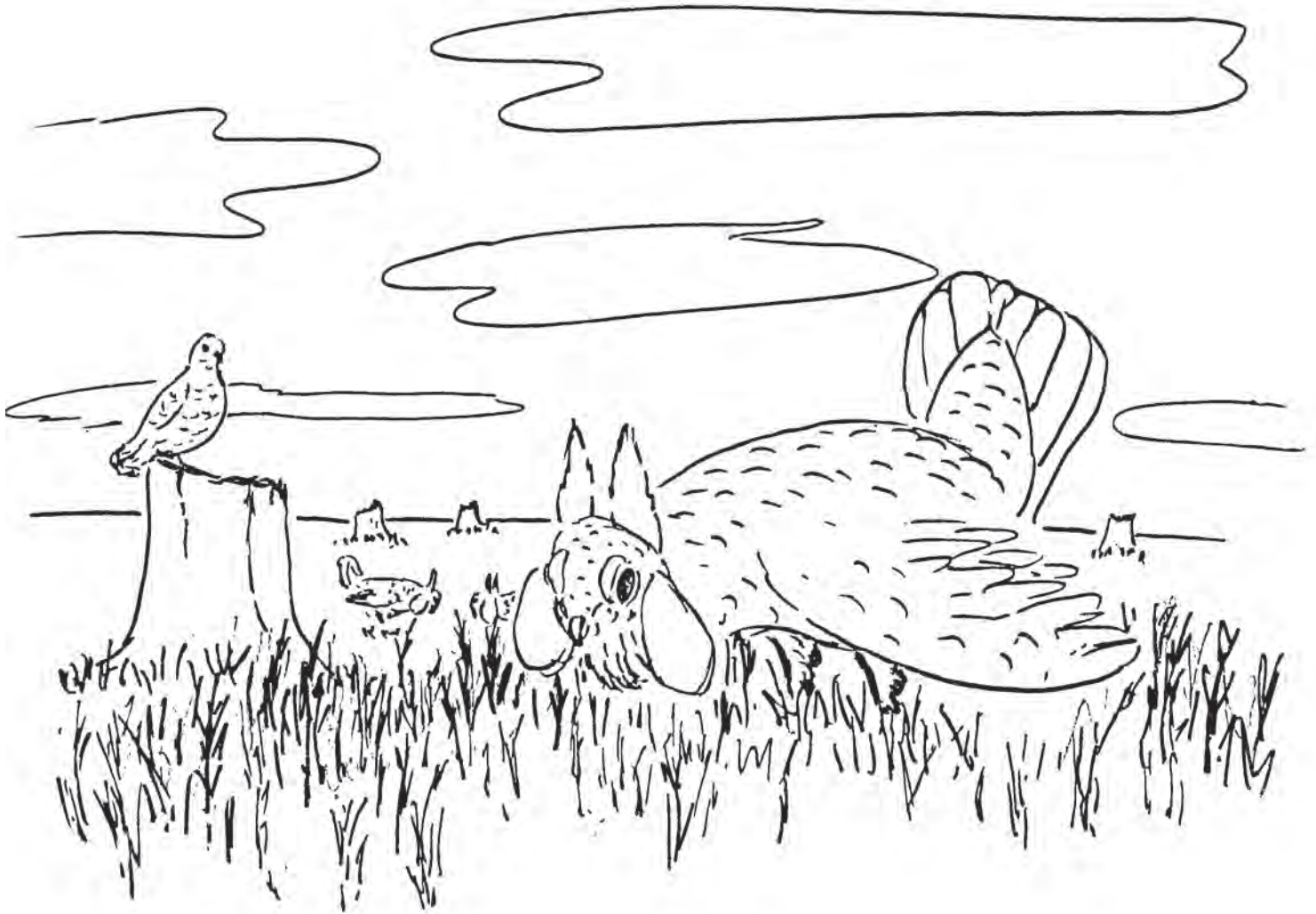
Fires broke out in the cutover forests burning the dried tops and branches which covered the ground. Some of these fires were caused by lightning, but most were caused by man. Some of the worst were caused by farmers' burning brush piles that were fanned by high winds. Whole towns were destroyed by some of these fires.



AFTER THE FIRES

At one time or another, most of northern Michigan was burned by wildfires. The land was left in a desolate condition.

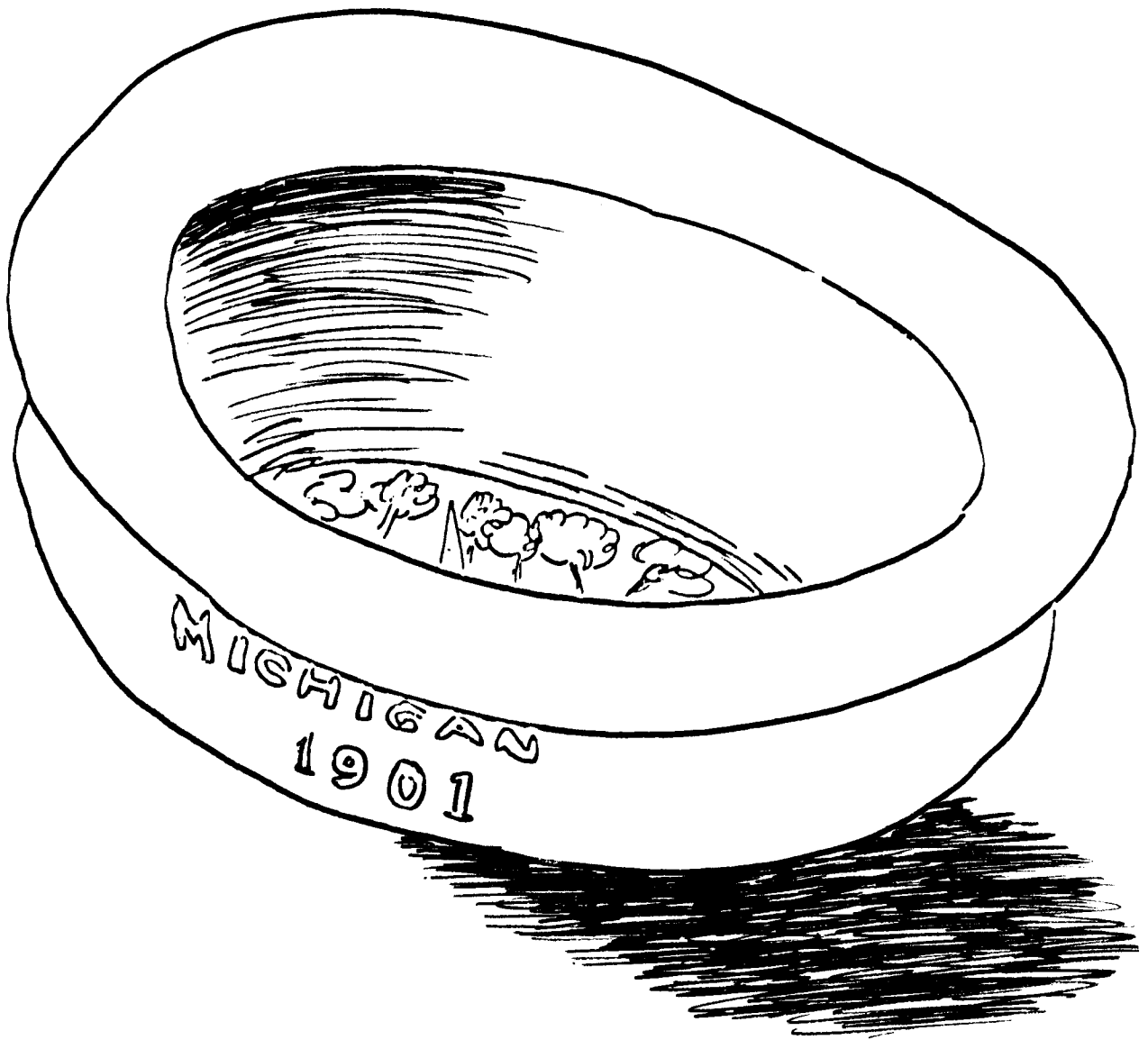
Charred stumps can still be found in the woods in most places in northern Michigan.



WILDLIFE

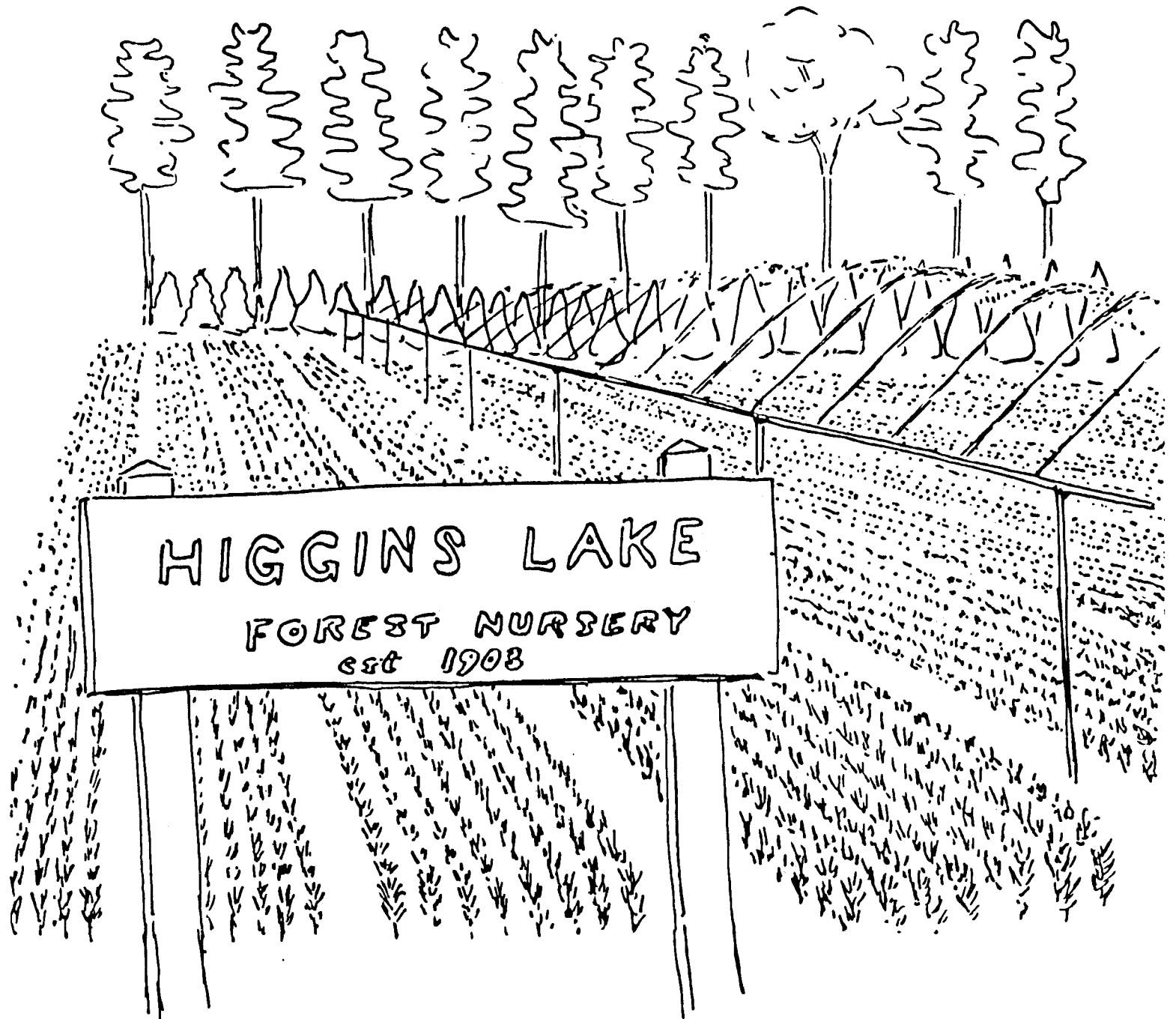
Due to the cutting and fires the land became more like grassland or prairie than forest. Prairie plants and animals moved in and made themselves at home. Prairie chickens (pictured), sharptail grouse and coyotes are some examples.

At the same time many forest animals disappeared from Michigan. Some, such as the woodland caribou, fisher and the pine marten, disappeared due to loss of habitat. Others, such as the passenger pigeon and the Michigan grayling were pushed to extinction.



EMPTY POT

By the turn of the century, Michigan's "green gold" was almost gone.

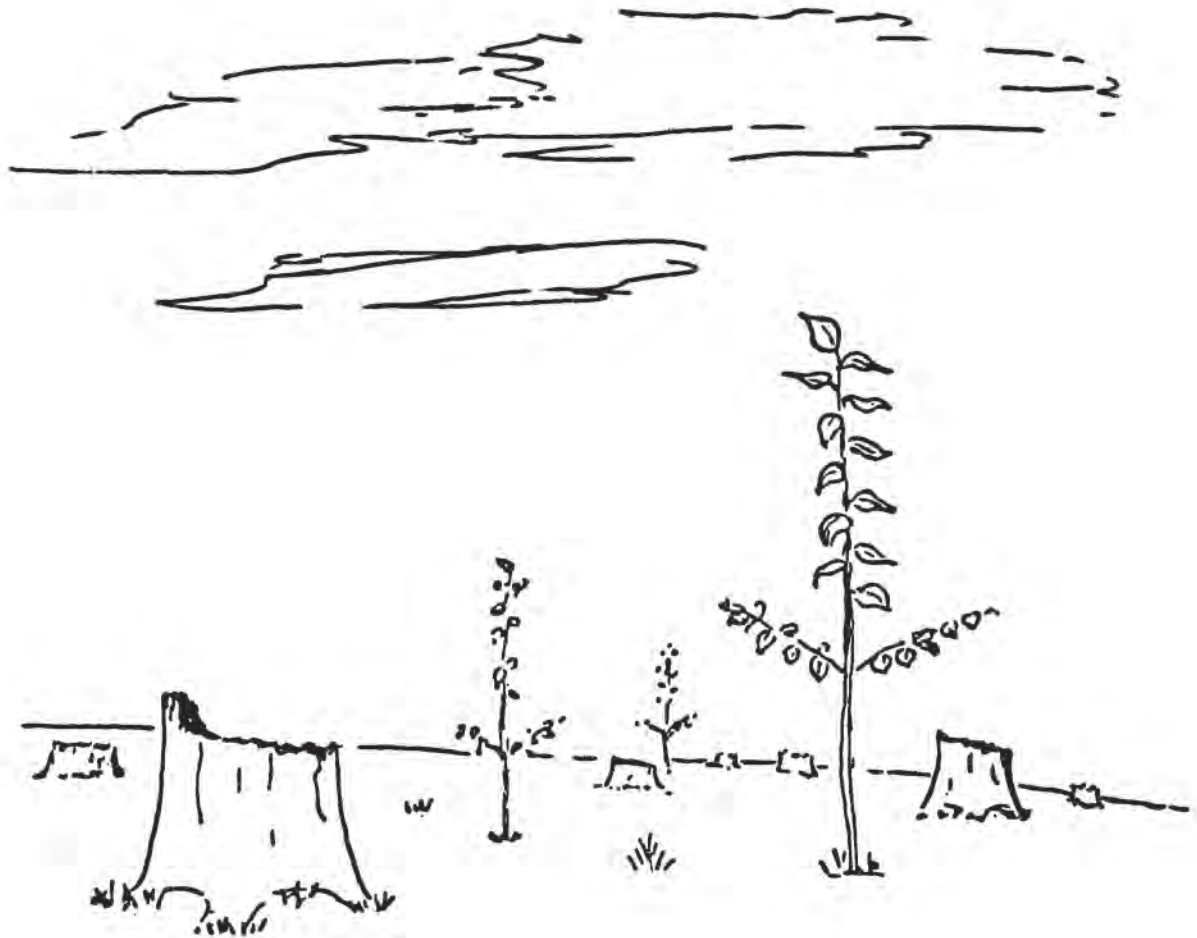


FOREST RECOVERY

Gradually, Michigan's people became aware of the plight of the forests and of the resulting economic problems. Many landowners abandoned their lands when the timber was gone, refusing or unable to pay the taxes.

In 1903 the Michigan Legislature passed a law creating the State Forest Reserves from these abandoned lands. Michigan's first forest nursery was established that same year at Higgins Lake.

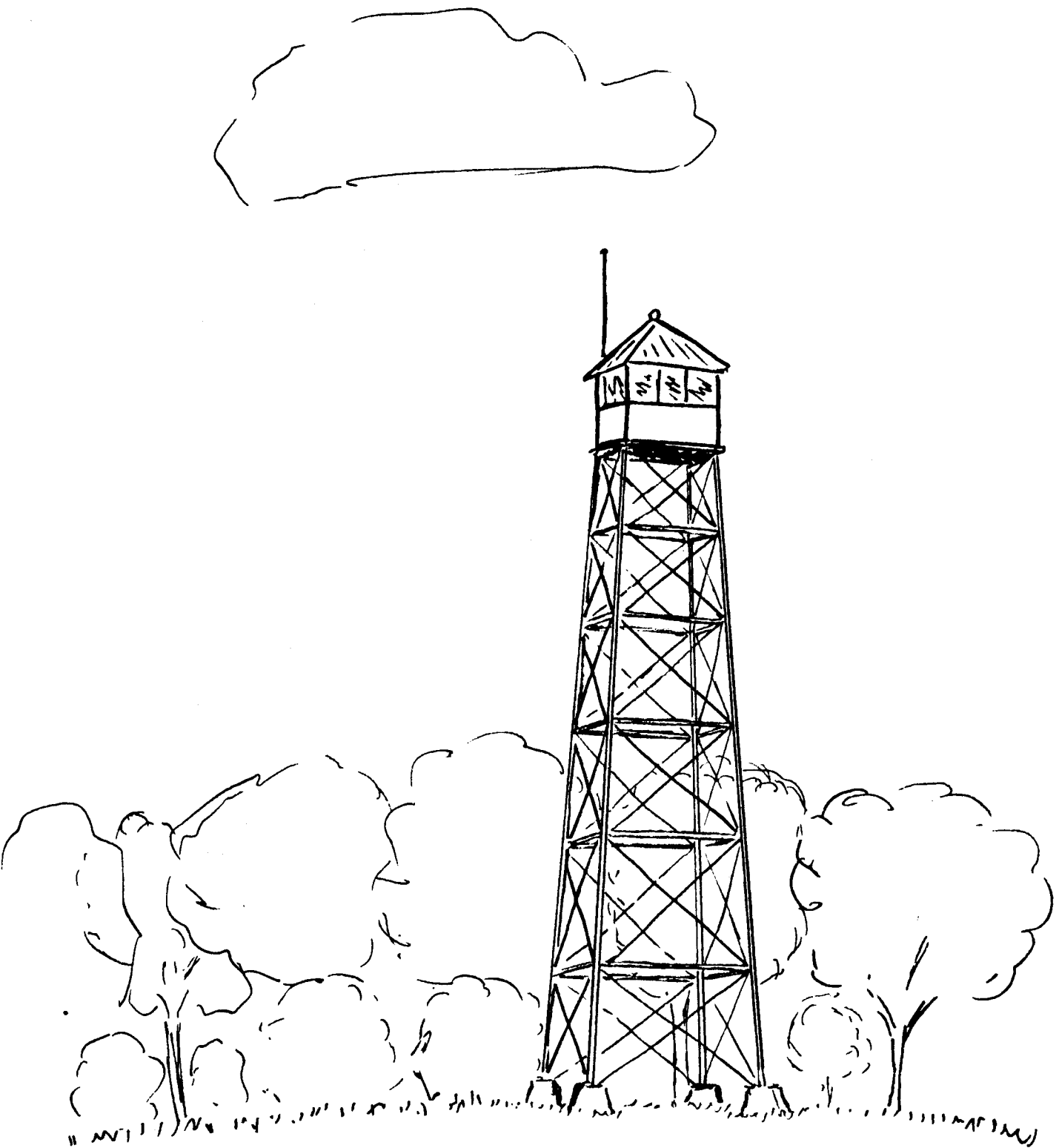
This marked the beginning of the forests' recovery.



NATURAL RECOVERY

While people were planting pine trees grown at the Higgins Lake Nursery, nature was busy planting trees of her own. Aspen trees, were among the first new “pioneer” trees to arrive on the burned-over lands.

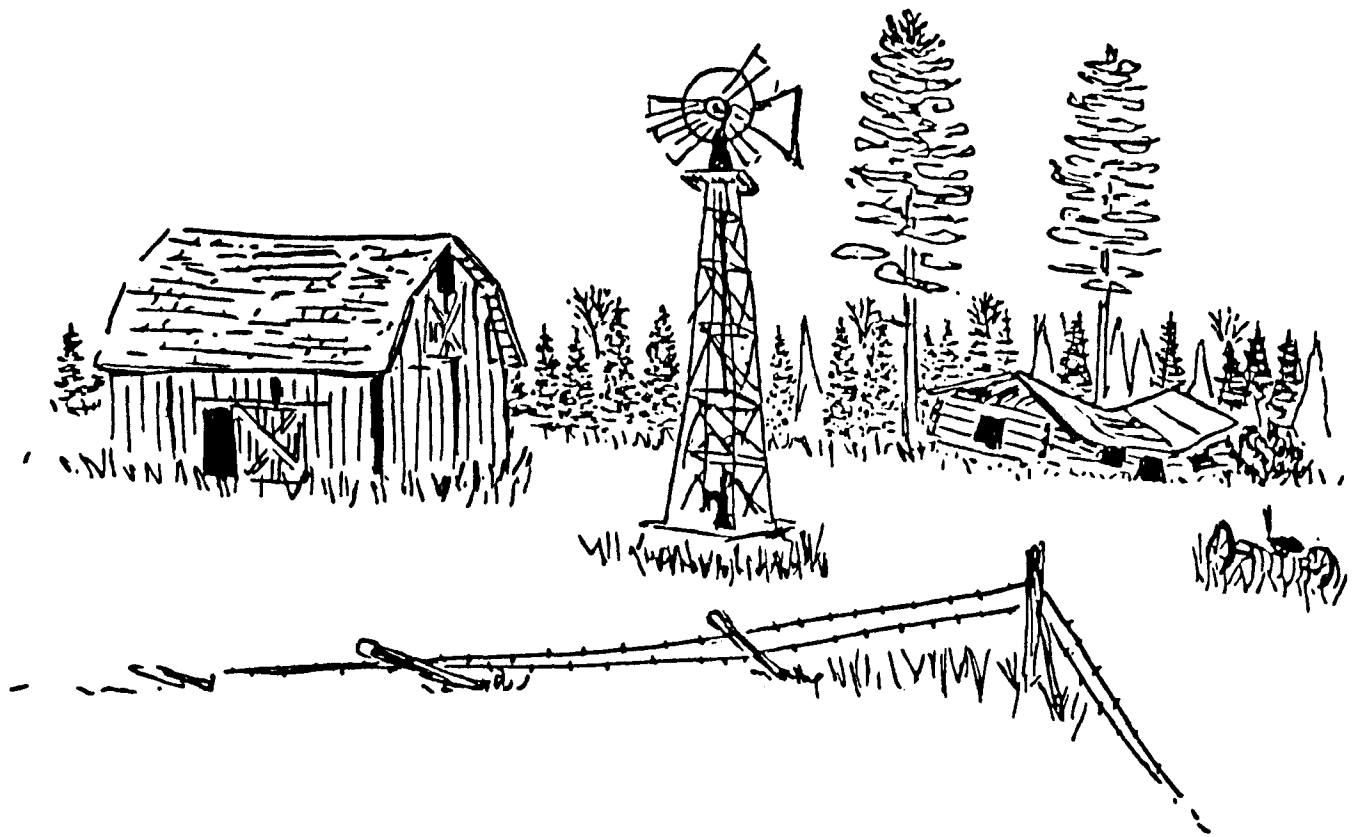
Much more land area was reforested by nature in this way than by humans.



FIRE PROTECTION

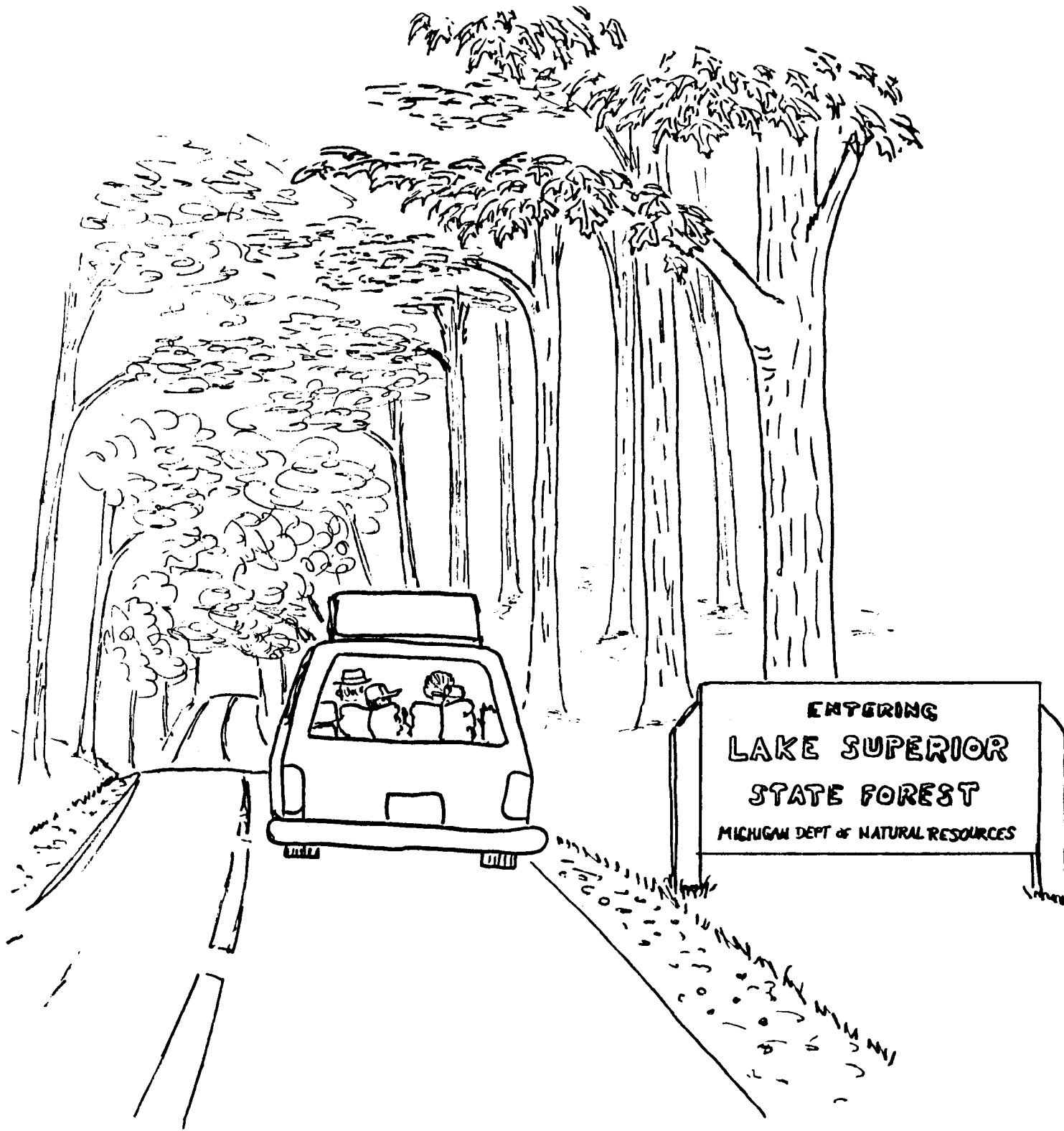
Wildfires continues to be a problem until, in 1920, the State formed the Department of Conservation and began to organize a fire-fighting, detection and prevention program.

“Towermen” sat in fire towers like the one in the picture to watch for fires. Today, people watch from airplanes instead of towers. Wildfires are still a problem, but are not as bad as they once were. Controlled fires are used today to prepare areas for planting and to improve areas for wildlife.



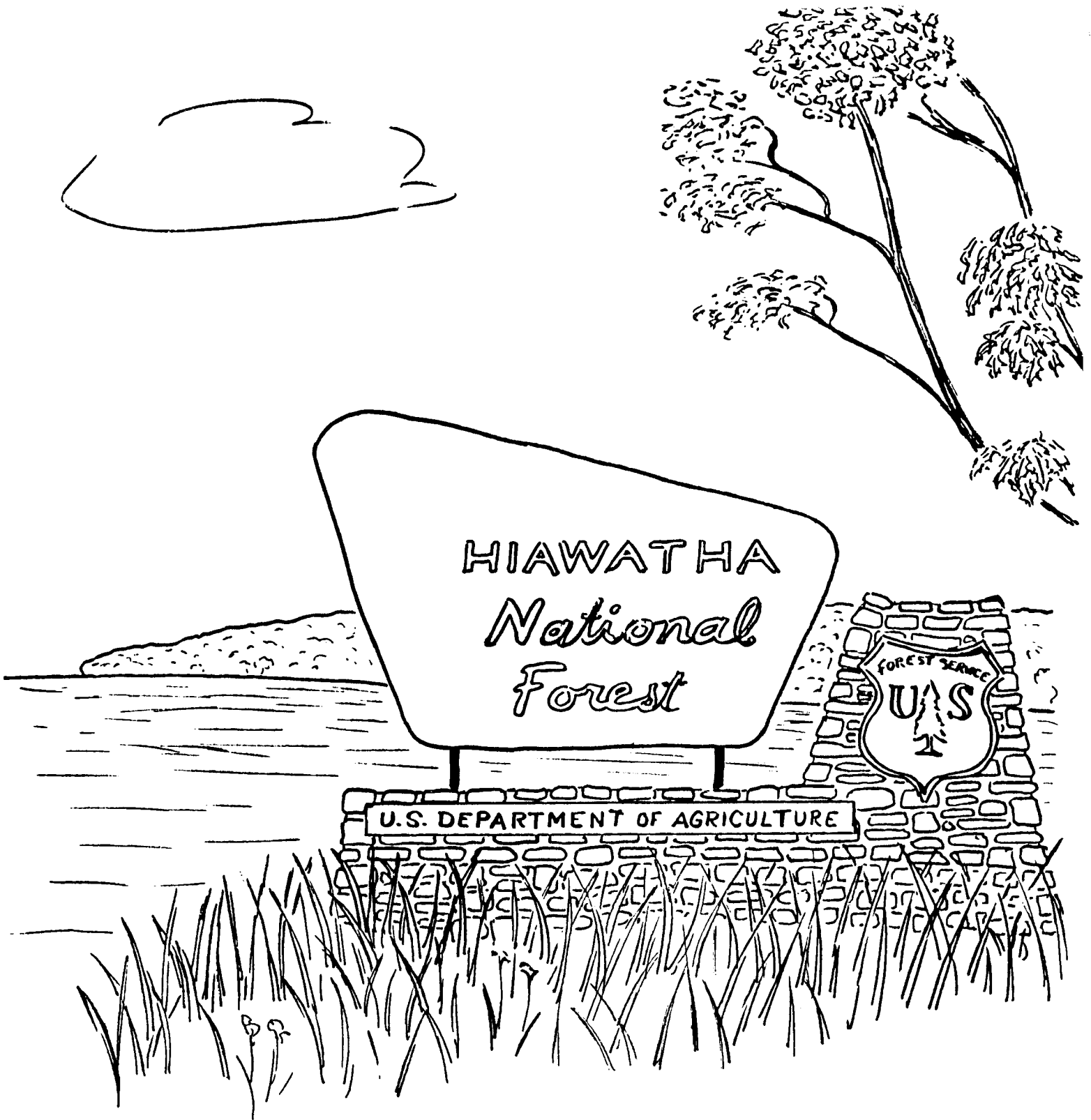
ABANDONED FARMS

Much of the sandy land put into farms in the North was unsuited for agriculture and was not able to produce crops after a few years of farming. Farmers found it more and more difficult to make a living from these farms and, one-by-one, they were abandoned.



STATE FORESTS

The abandoned farms, along with the economic Depression, led to another large amount of land being added to the Forest Reserves during the 1930's. The Forest reserves became a part of the Department of Conservation (now called the Department of Natural Resources) and were organized as the State Forests. Today they total nearly 4 million acres and make up about 19% of the forest land in Michigan. This is the largest State Forest system in the United States.



NATIONAL FORESTS

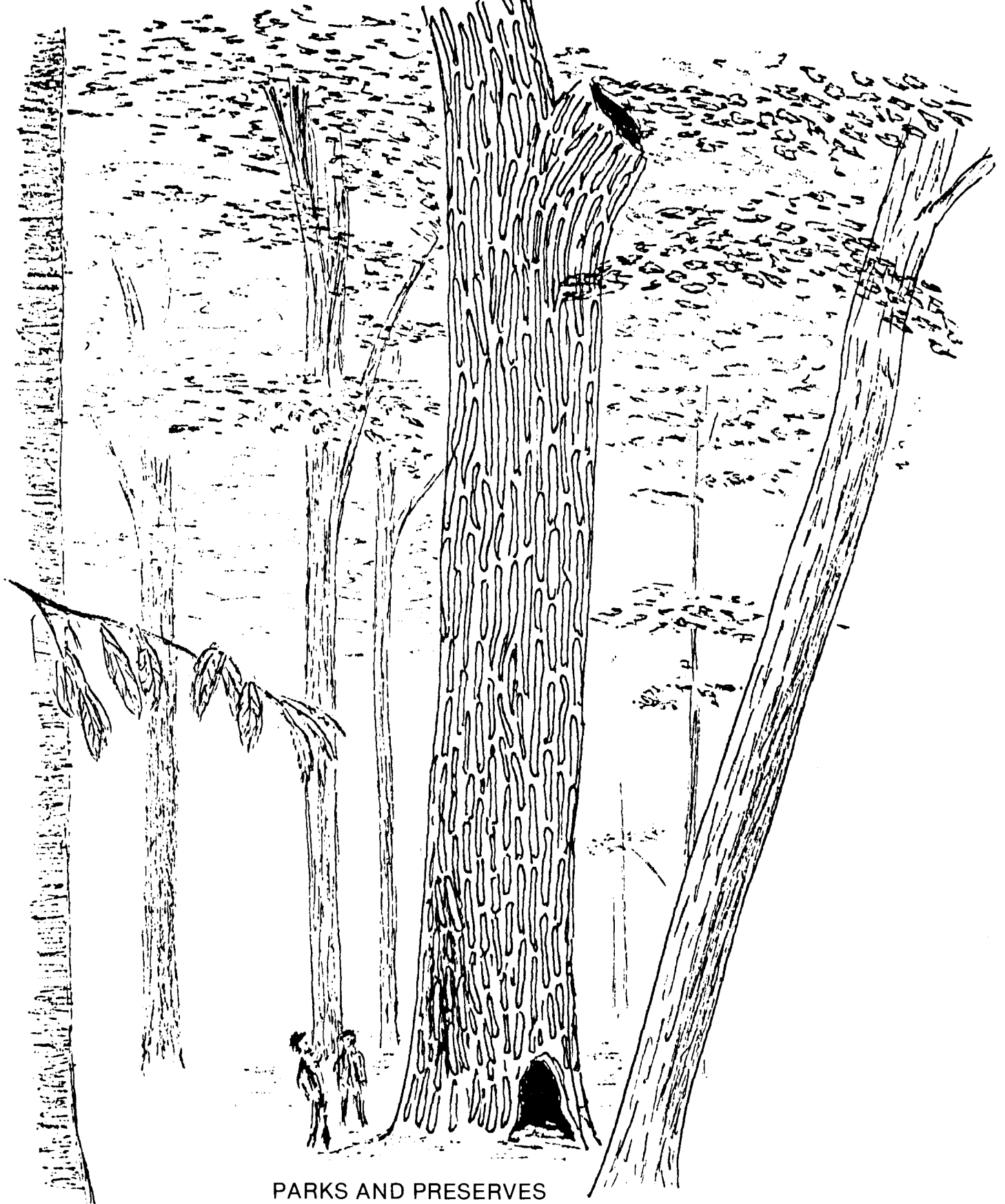
From 1929 through the early 1930's lands were purchased by the federal government to be used as National Forests. There are four National Forests in Michigan totalling over 2 million acres, or about 13% of the forests in the state.



PRIVATE LANDS

Private landowners still own nearly 12 million acres of forest land, or 54% of Michigan's total. More than two thousand of these owners belong to the Tree Farm program, a partnership between landowners and the forest industries designed to help owners manage their forests and help industry get needed wood products.

The forest industry itself owns almost 2 million acres, or roughly 11% of Michigan's forests.



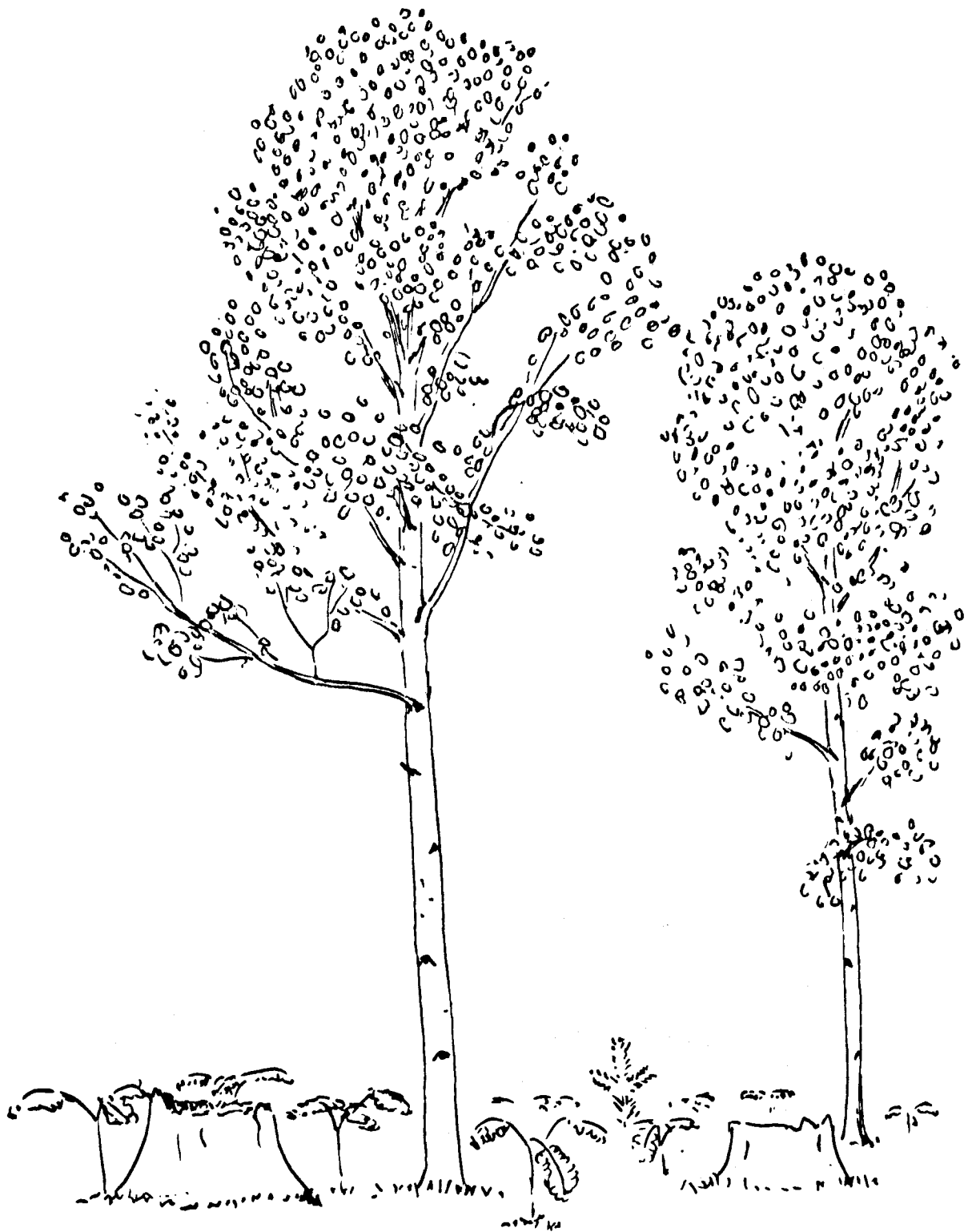
PARKS AND PRESERVES

Some areas, for one reason or another, escaped the logging and fires. Some of these areas support impressive stands of trees or individual trees. Many such areas are preserved as parks or other special areas. Porcupine Mountains and Hartwick Pines State Parks are examples of large preserves. There are also many smaller areas. One example is Michigan State University's Russ Forest, where a small grove of trees containing the state's largest tuliptree (pictured) is preserved. These preserves add up to more than three percent of Michigan's forest



REFORESTATION

Pine trees were planted on some of the worn-out farms. This was successful because tree roots go deeper into the soil than the roots of farm crops. The trees bring nutrients up from the lower soil layers and deposit them on the surface as their leaves fall. Thus, trees can gradually restore soil fertility.



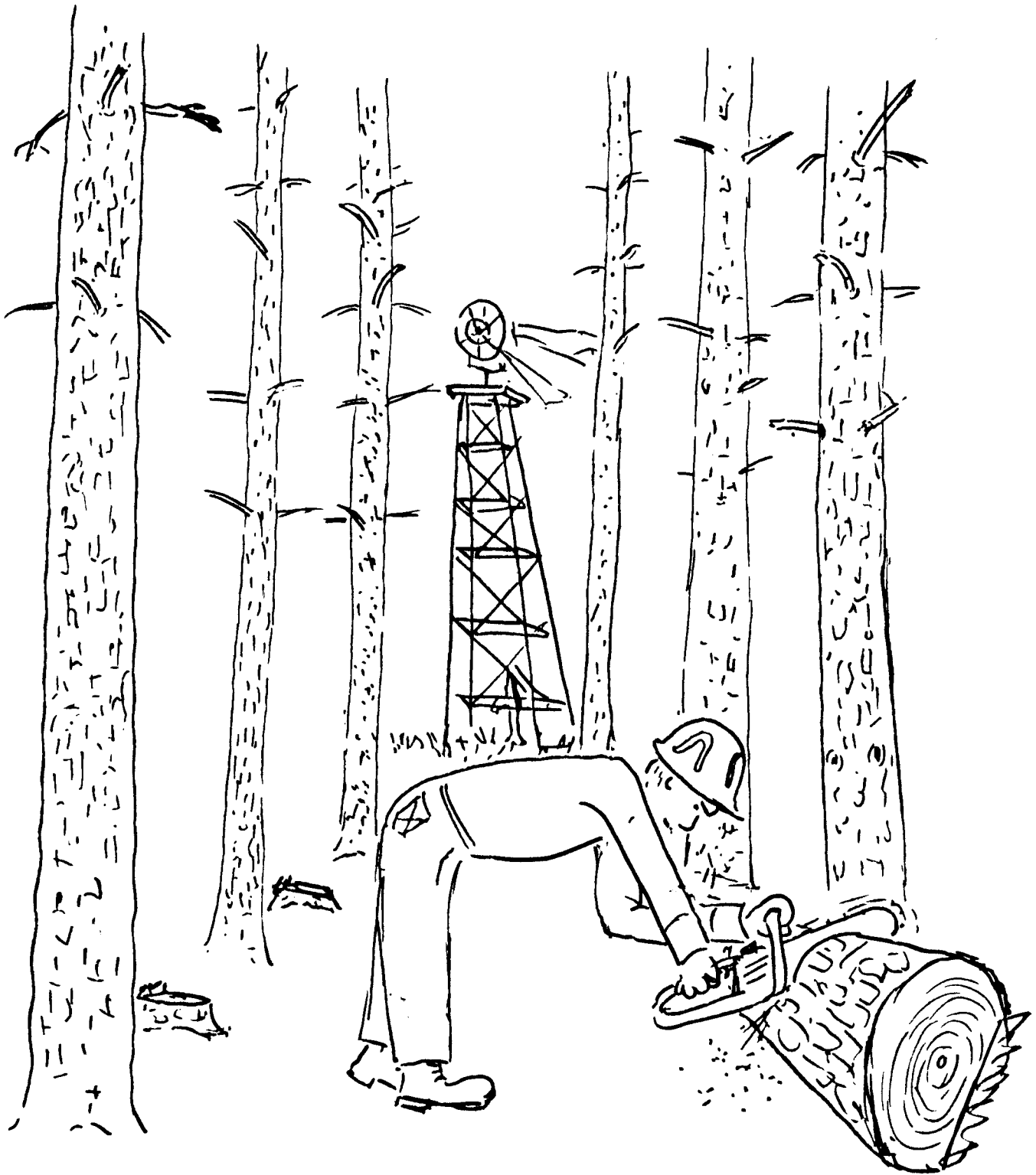
RETURN OF THE FOREST

Mother Nature kept busy steadily growing the trees she had planted and those planted by people as well. Gradually the forest was returning.



THE CHANGING FOREST

As the "pioneer" aspen trees shaded the ground and cycled nutrients to the surface, other kinds of trees found favorable conditions under them. White pine and balsam fir commonly grow under aspen. Maple and beech will also grow in the shade on rich soils.



HARVESTING THE NEW FOREST

As the forests continued to grow, useful products could once again be harvested. These early products were usually the results of thinnings which were done to make room for other trees to grow.

Once again people were able to look to the forest for wood and for employment. Notice the different type of saw from that being used in the picture on page 7.

Do you remember the windmill from pages 19 and 27?



RETURNING WILDLIFE

Some of the animals which had disappeared from Michigan, such as the pine marten (pictured), fisher and moose are once again finding a home here.



REFILLING THE POT

The pot is more than half full of the "green gold" again.

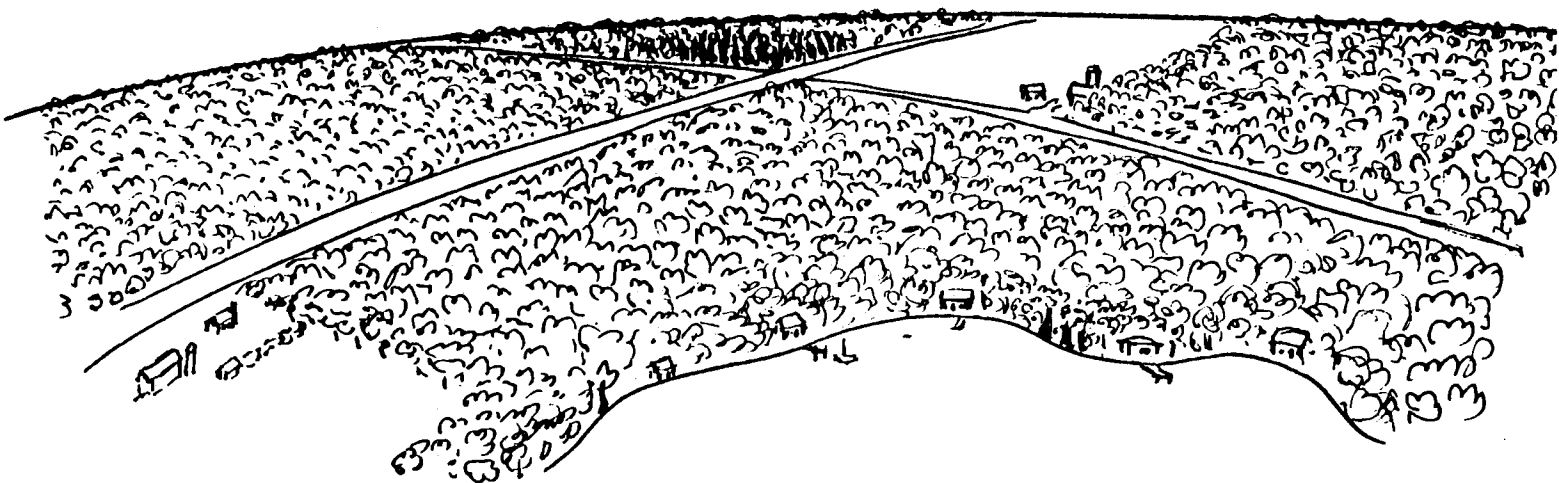
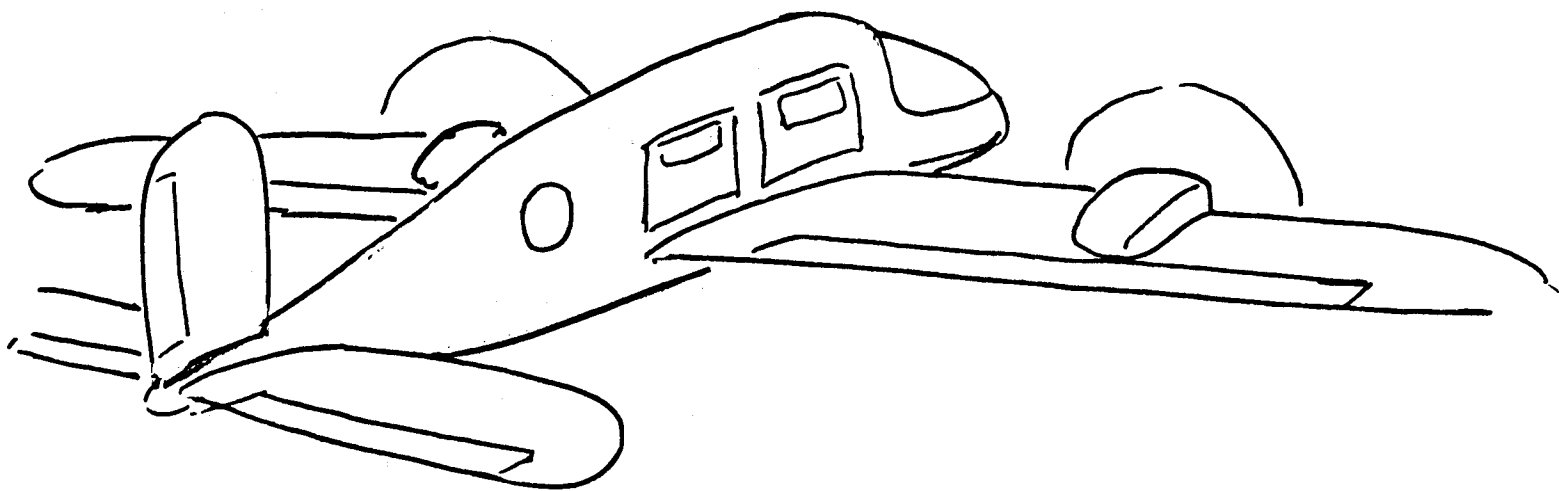
And, once again, investors are coming to take advantage of it. Modern sawmills, paper mills and particle board mills are being built to make useful and needed products from our forests.



MODERN LOGGING

This time the harvest is being done, not by hand tools and horses, but by chainsaws and machines. Today's loggers drive back and forth from home every day like other workers. There are no true logging camps in Michigan any more.

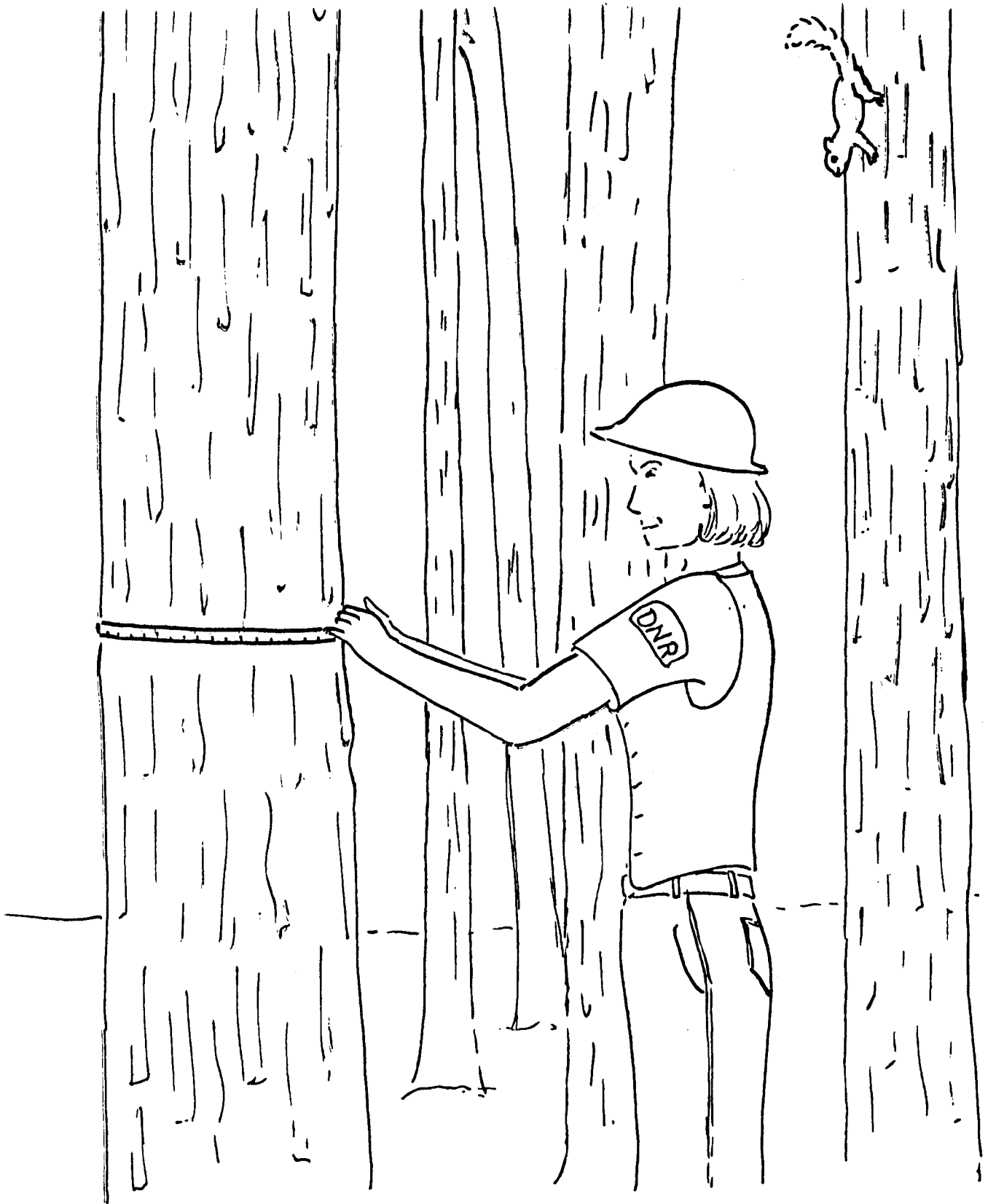
Most cutting today is done according to scientific methods that leave the area ready to grow a new crop of trees. These methods include everything from cutting all trees (clearcutting) to choosing only a few at a time. The method depends on the type of trees and the type of new trees desired.



KEEPING TRACK

With all the modern machinery working in the woods it would seem that the forest may be in danger of disappearing again. In order to prevent this, State and National Forests schedule their harvests to assure future supplies.

There are no state regulations of cutting on private lands, so to keep track of the forest's condition, the Department of Natural Resources and the USDA Forest Service cooperate to take periodic surveys. Photographs are taken from airplanes and compared to photos of the same areas taken 10 or more years earlier. In this way foresters can determine whether the forests are increasing or decreasing.



FOREST RECOVERY

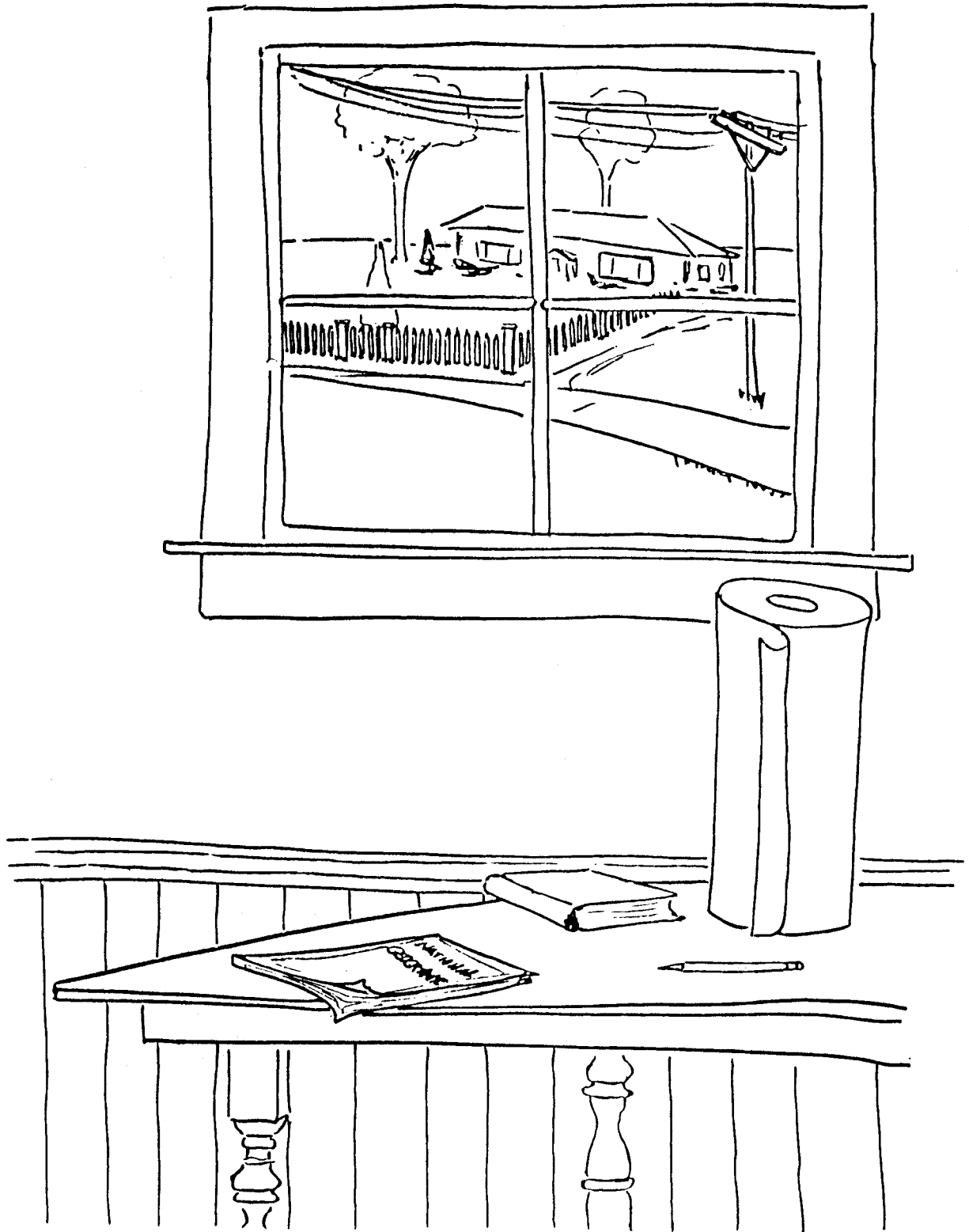
The Forest Surveys involve making measurements of tree growth and health on the ground. Surveys in 1966 and 1980 showed the forests are still bouncing back from the abuse they received 100 years ago; future surveys are expected to show continued recovery.



THREATS TO THE FOREST

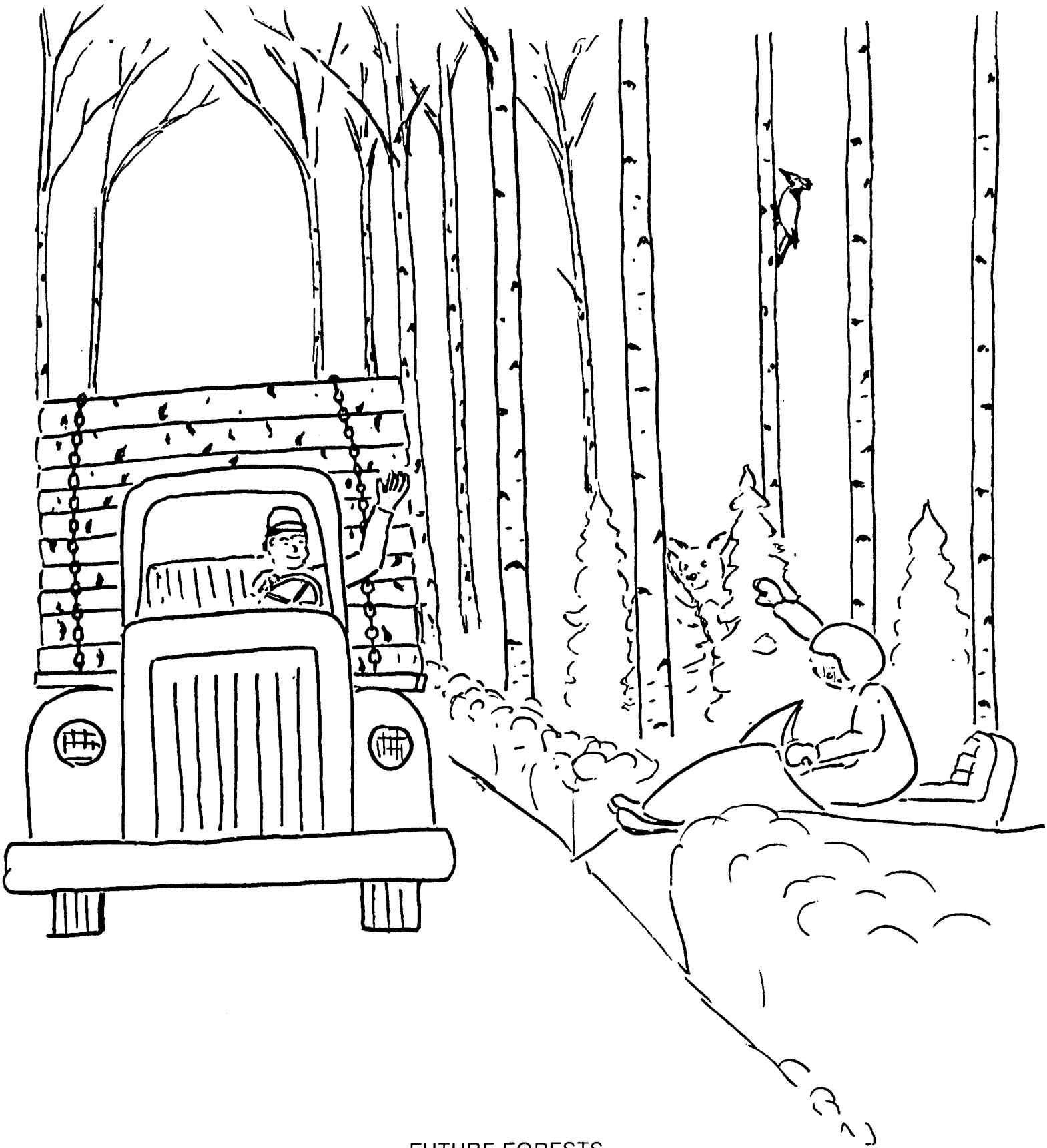
In spite of the good news from the Forest Surveys, scientific forest management and fire protection, Michigan's forests face certain dangers. Perhaps surprisingly, today's threats come not so much from cutting trees, but from changing land uses.

The conversion of wildland to housing subdivisions and shopping centers is steadily reducing the amount of forests in Michigan.



WOOD PRODUCTS

Michigan's forest industry is growing, too. Thousands of people are employed in many ways in the making of paper, particle boards, lumber, cabin logs, telephone poles and many other products made from wood. How many can you identify in this picture?



FUTURE FORESTS

Our forests have been badly abused in the past, but they are making a fine recovery. Where farms and towns were abandoned long ago, people are returning and finding employment and enjoyment in the forest.

If we are careful with fire and we make wise land use decisions, we, our children and our grandchildren can continue to work and play in the forest in Michigan.

GLOSSARY

BLACKSMITH	a person who makes things from iron by heating it in a fire and shaping it with a hammer. Horseshoes, hinges and nails were commonly made by blacksmiths.
DEPLETED	used up, as when resources are depleted.
DEPRESSION	a time when business activity is slow.
ECONOMIC	related to money matters.
EXTINCTION	complete destruction-there are none left anywhere in the world. (Often confused with extirpation, which means destroyed so that there are none left in a certain area.)
FERTILITY	the amount of nutrients in the soil.
GLACIER	a field of ice formed in regions of permanent frost from compacted snow. Huge, continental glaciers are thought to have moved across Michigan thousands of years ago, leaving our lakes and hills behind when they melted.
HABITAT	the type of surroundings where a plant or animal lives.
HARDWOOD	any of the broad-leaved trees that drop their leaves in the fall.
INVESTOR	a person or company that spends money on a project with the intent of making a profit.
LANDLOOKER	a person hired by lumber companies in the late 1800's to examine lands and estimate the amount of timber on them.
NUTRIENTS	substances in the soil which help plants grow.
SMELTING	the process by which iron is produced from iron ore. It involves heating the ore in a blast furnace and using limestone to remove impurities.
TRACT	an area of land.
USDA	United States Department of Agriculture.

SUGGESTED RESOURCES

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Michigan Teaching Guidelines for Late Elementary Social Studies

This booklet has been used especially in 4th grade classrooms in studying Michigan history. It contains information to tie in to the following topics in Michigan history:

Settlement and Statehood: 1800-1850

Natural Resources: 1855-Present

Depression and Labor Movement: 1929-1941

The booklet is useful in covering the following Standards and Benchmarks for Late Elementary:

Strand I. Historical Perspective

Standard I.1.1,2 LE

Standard I.2.1,2 LE

Standard I.4.1,2 LE

Strand II. Geographic Perspective

Standard II.2.1,2,3 LE

Standard II.3.1,4 LE

Standard II.4.3,4,5 LE

Strand IV. Economic Perspective

Standard IV.1.1,2,3 LE

Standard IV.2.1,2,3 LE

Standard IV.4.1,3 LE

Standard IV.5.2 LE



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