



-Forest Basics-

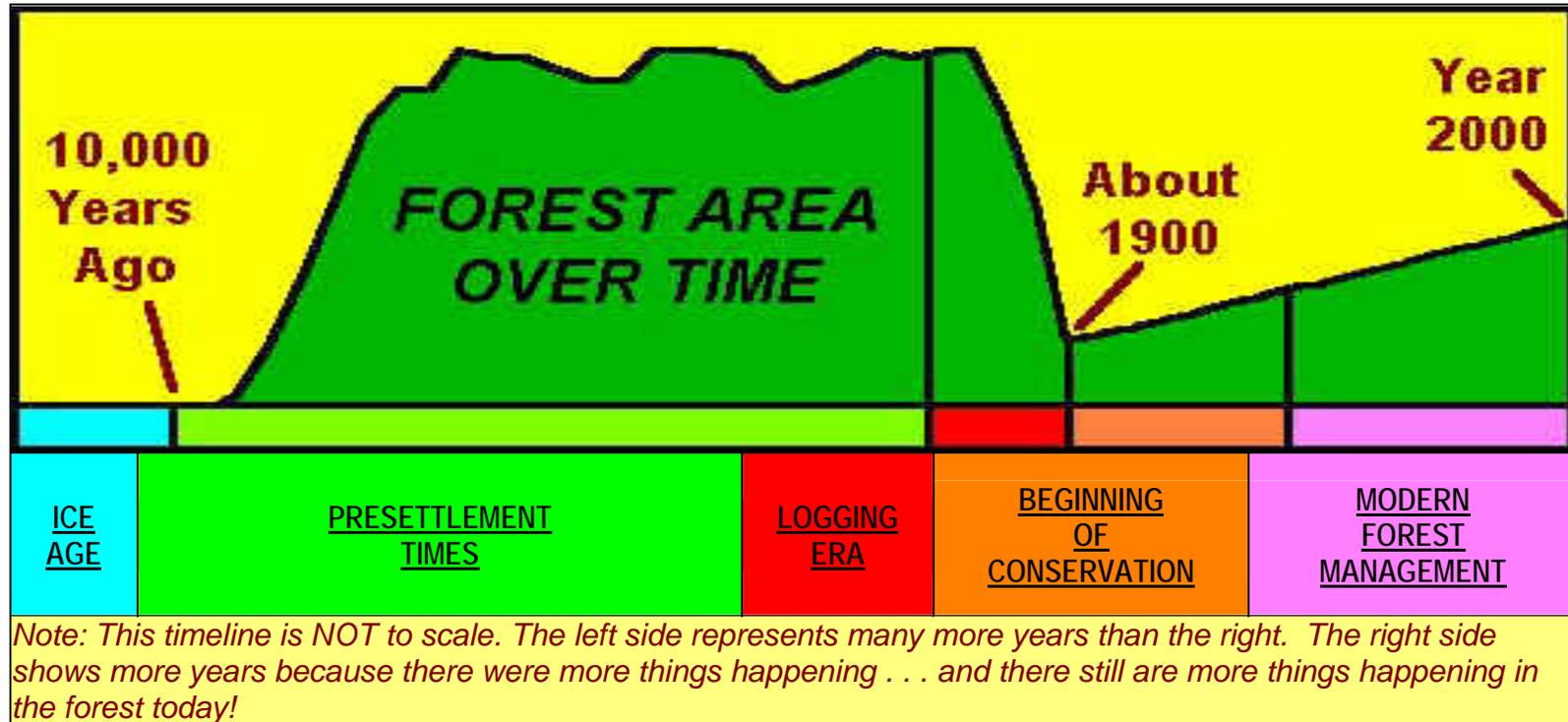
Michigan Forest History

Adapted from the on-line Teachers Guide
<http://mff.dsisd.net>

MICHIGAN STATE
UNIVERSITY
EXTENSION

MICHIGAN FOREST HISTORY

www.dsisd.k12.mi.us/mff



Michigan has a colorful forest history, similar to that of Wisconsin and Minnesota. After the retreat of the glaciers, vegetation gradually moved back into Michigan. Some tree species returned centuries before other tree species. Our forests are ever-changing from the effects of climate, nature, and the influences of human beings. American Indians changed the forest in many ways. When people began logging the forest in the middle 1800s, the forest at that time was in a condition useful to our growing nation. Our forests continue to be great natural resources, both for wood production as well as the many other benefits we receive from the Great Forests of the Great Lakes State!

MICHIGAN FORESTS DURING THE ICE AGE

It's pretty easy to imagine what forests looked like during the Ice Age. There were no forests! At least not in what we now call Michigan. In fact, there wasn't much in the way of living things at all. Michigan was covered with as much as a mile of ice!



So, where were all the trees and other living things that make up our forests today? Glaciers cooled nearby areas so that northern species could live farther and farther south as the glaciers advanced. Remember that the process of glaciation took thousands of years. It didn't happen overnight. As the global climate cooled, snow and ice built up in the north. When the climate warmed up, the forests moved back north.

About 12,000 years ago, behind the retreating glaciers, a new landscape was exposed. The Great Lakes filled deep depressions left by the glaciers. The rocks, gravel, and soil in the ice sheets were either pushed by the ice or were deposited in hills called moraines, drumlins, eskers, and kames. Also, the crust of the Earth rose after the massive weight of ice disappeared. Water flowed all over the land leaving a new set of soils for trees and plants to establish themselves. The pattern of these glacial deposits has a strong influence on the kinds of forests we see in Michigan today.

In North America, there were no barriers to block the forest species as they moved north and south. But this wasn't the case all over the world. In Europe, for instance, the mighty Alps prevented many northern species from gradually moving south. They got squashed between the glaciers and the mountains! When the glaciers began to retreat, the northern forests of Europe were left with a lot fewer species than the northern forests of North America.

Not all tree species moved back north at the same rate. The light seeded species came back first, such as aspen. Species such as oak, took a lot longer to return. One way that scientists know this is from examining ancient pollen grains trapped in the muck of bogs and old lake bottoms. It's kind of cool how they have figured this stuff out!

Since the glaciers left Michigan, our forests have been constantly changing. There have been drier and wetter periods that affected the forest. But that's more of the story in the "**pre-settlement**" part of this website. The important point to keep in mind is that our forests have always been on the move. They never stayed one way for too long (at least in geologic time!).

MICHIGAN FORESTS DURING PRE-SETTLEMENT TIMES

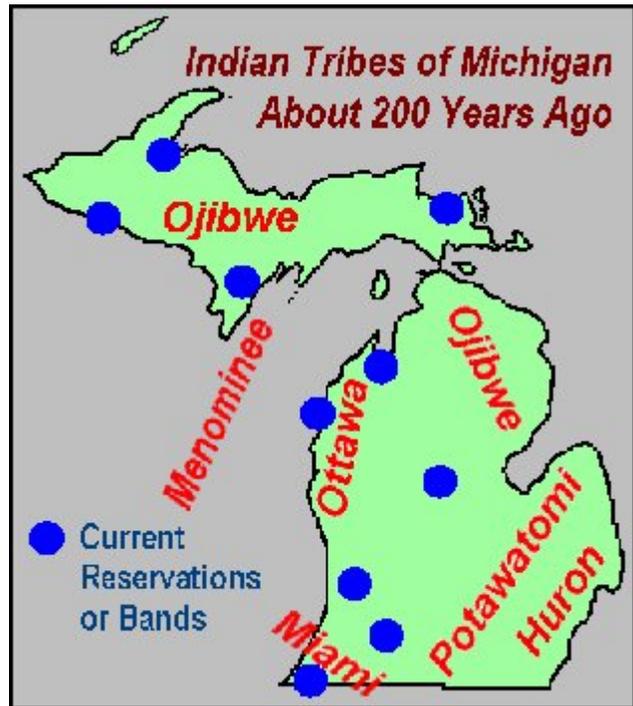
Pre-settlement time runs from the end of the glaciers, about 10,000 years ago, to the time when Europeans and Americans started to settle in what is now Michigan. During this time, there were many American Indians living along the shores of the Great Lakes and the major rivers. Ojibwe (Chippewas), Menominees, Ottawas, Potawatomis, Miamis, and Hurons were important peoples living in Michigan. And before them, there were the Woodland Cultures. These people came to Michigan for many reasons, including copper mining. Archeologists don't know a lot about them, but the Woodland Cultures left enough evidence to let us know they were here!

Since the glaciers retreated from Michigan, there have been many kinds of forest and other vegetation types, including prairies. The climate changed several times during this period, sometimes much drier and sometimes wetter. The kinds of tree species and other forest species have changed, too. When the European and American pioneers began to settle Michigan in greater numbers, much of the forest was "ripe" enough to be very important to the growing towns and cities.

Michigan forests around the 1600s to the middle 1800s were similar to what they are today. However, there were some important differences. Most of Michigan was covered in forest back then. Today, a little over half of Michigan is forested. Agriculture and cities are the main reasons why our forest area has shrunk. However, over the last couple decades, the area of Michigan forest has begun to increase.

Many of the trees were larger and there used to be more pine, tamarack, hemlock, and some other tree species. And, there were fewer aspens, red maple, and paper birch than there are today. The famous stands of white pine were critical in the settling of these territories. A good example of one of these "pine groves" can still be seen at Hartwick Pines State Forest near Grayling, although it is getting old. Not all the forest was covered with huge pines, however. Most of the forest was probably similar to what we see today. Fire and wind kept much of the forest in a young condition. Forest scientists are discovering just how important these disturbances were to the forest condition and ecology.

Before settlement began in a big way, Europeans and Americans (from the first states) traveled along the shores of Michigan for many years. The first explorers were men

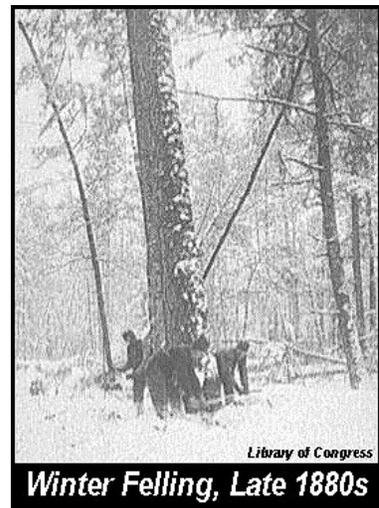


such as Etienne Brule, Father Jacques Marquette, Louis Joliet, Robert LaSalle, and Antoine Cadillac. They came in the 1600s but were not much interested in the forests. Many French Voyageurs passed through the region looking to send furs back to Europe. The first towns in Michigan were Sault Sainte Marie and Saint Ignace, started in 1668 and 1671. But most of the towns didn't get going until the 1800s. People didn't become interested in trees and lumber until the 1800s. Michigan was part of the Northwest Territories, organized in 1805. In 1837, Michigan became a State. By then, new cities were beginning to grow along the Great Lakes. It was time to **log the forests**.

MICHIGAN FORESTS DURING THE LOGGING ERA

The great logging era is, perhaps, one of the most famous periods of growth in the United States. Early American settlers viewed the forest as either a barrier to development or a source of rapid wealth. As the forests of the east were depleted, logging companies moved west into the Great Lakes area. From about 1840 to 1900, most of the Michigan forests were cut down for farms and to produce lumber for buildings, ships, and mines. Michigan was the nation's leading lumber producer between 1869 and 1900.

In early days of logging, there were few roads. Logging companies built "camps" and brought in crews. Most of the cutting was done in the winter when it was easier to move the logs to water. After the spring melt, the logs were floated down rivers and across lakes to sawmills. The first sawmill was built in 1832 at the mouth of the Menominee River in the Upper Peninsula. The sawn lumber was loaded onto ships and carried to markets.



At first, just the pines, especially white pine, were harvested. It makes really good lumber and would easily float! Most of the hardwood species have denser wood and would just sink and be lost. Remember, there were few roads and railroads at that time. All this work was done by human power and horse power. Men used axes and long cross-cut saws. It is amazing how much wood was moved using these simple technologies! The invention of the "big wheels" made hauling logs out of the woods much easier and faster.

Later on, railroads were used to transport logs. Many special railroad lines were built to carry logs out of the forest to sawmills and mines. In the Upper Peninsula, the smelters for copper and iron used a lot of hardwood for fuel. The forests were one of the main reasons many people came to Michigan.

How much wood was cut during the logging era? Well, the exact figure will probably never be known. By 1897 over 160 billion board feet was logged from Michigan

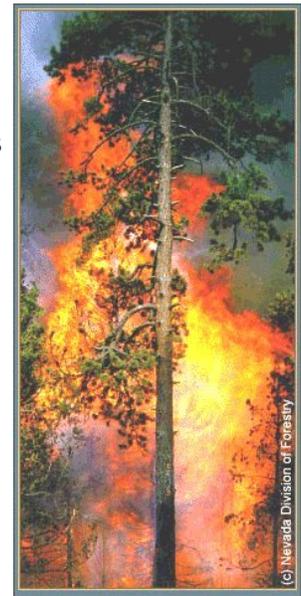
forests. Today, the forest has about 70 billion board feet of sawtimber. If 160 billion board feet of logs were laid out in a pile four feet high and eight feet wide, it would go around the world about 50 times, or to the moon and back about five times! The value of all the harvested wood was greater than all the gold from California during the gold rush!

Try to imagine what the landscape looked like after logging! It is much different than logging today. Many farmers moved in after the loggers to remove stumps and began planting crops. Often times, settlers would burn the woods to help clear the land. They waited until conditions were dry enough to get a good fire going.



With all the settlers and loggers across Michigan, you can imagine what happened next. Michigan experienced terrible forest fires in the late 1800s. The most famous fire was probably the Peshtigo Fire in 1871, although most of that happened in Wisconsin. The same year, several large fires scorched two million acres in the Lower Peninsula around Manistee and Saginaw, and also in northeast Michigan and the "thumb". That year, Michigan Agricultural College (now Michigan State

University) was threatened by wildfire and saved by student firefighters! The Thumb Fire in 1881 burned most of that area. In 1908, another two million acres burned. Many lives were lost in these fires . . . and a lot of forest, both young and old, was consumed.



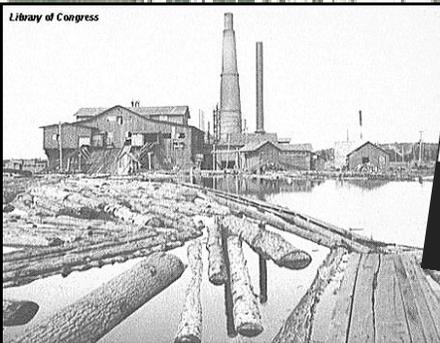
Mining created a large demand for hardwood timber for mine props and for charcoal to smelt iron. The furnaces of the Upper Peninsula burned about 30 acres of hardwood timber each day! The early automobile industry used a lot of wood in cars, as much as 250 board feet. That's an eight foot log, 27 inches in diameter for each car to come off the assembly line! No wonder that Ford Motor Company once owned over a half-million acres in the U.P.

Around the year 1900, Michigan citizens started to worry about the future of forests in Michigan. They were concerned about the way our forests were disappearing. This was the beginning of the Conservation Era in Michigan.

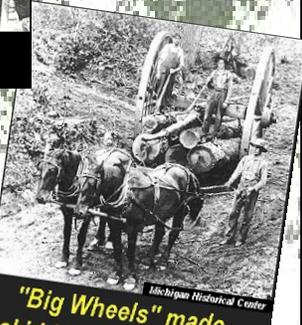
IMAGES OF THE EARLY MICHIGAN LOGGING DAYS



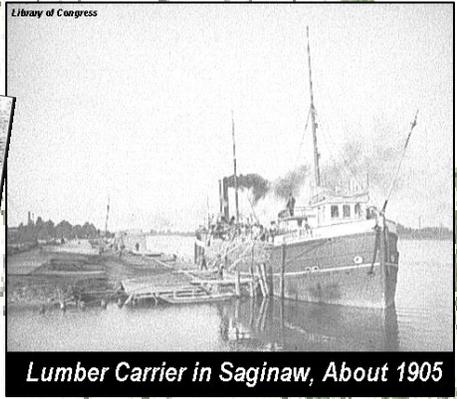
Michigan Logging Camp



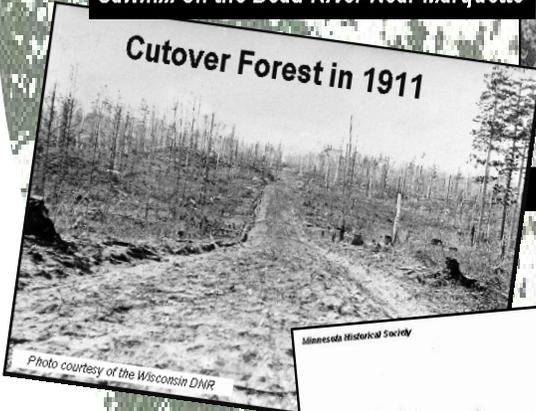
Sawmill on the Dead River Near Marquette



"Big Wheels" made skidding logs from the woods much easier.



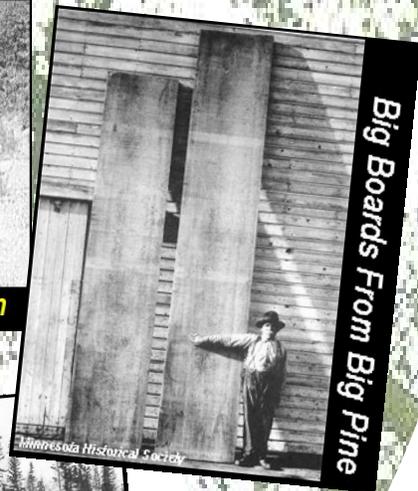
Lumber Carrier in Saginaw, About 1905



Cutover Forest in 1911



Early 1890s Logging Train



Big Boards From Big Pine



Logs Waiting for the River Ice to Thaw

MICHIGAN FORESTS THE BEGINNING OF CONSERVATION



Around 1900, many people in Michigan and across the United States began to understand that forest resources were not going to last forever. A shortage of wood and the loss of other forest values was seen as a possibility. During the Conservation Period, many groups and agencies were formed. The U.S. Forest Service was organized in 1905 and our National Forests were created between 1909 and 1938. The Michigan Forestry Commission was established in 1899 and the Michigan Department of Conservation (now the Department of Natural Resources) was formed in 1921. The first State Tree Nursery was established at Higgins Lake in 1904. The first corporation to hire a forester was Cleveland Cliffs, who hired S.M. Higgins in 1903. The Conservation Era lasted about 40 years roughly from 1900 to 1940.

Nationally, there were many leaders driving the conservation movement. Gifford Pinchot and John Muir were two of these leaders. Pinchot wanted the federal government to get involved with forest management. He was interested in making sure there was enough wood and other forest uses for the generations of Americans to come. Pinchot realized that we needed to manage forests for the benefit of society. He began the Society of American Foresters, which celebrated its 100th birthday in 2000. Muir wanted to keep special places from from being changed by people. He was an important person in making Yosemite National Park the first national park in the world. Both men were friends of Teddy Roosevelt, our 26th president. Roosevelt pushed for a lot of new conservation laws.

Gifford Pinchot was the first Chief of the U.S. Forest Service when it was created in 1905. He was concerned that the United States might run out of timber if forests were not managed properly. In the first eight years, the acreage of National Forests went from 62 million acres to 190 million acres, including lands that were to become part of today's Hiawatha and Huron-Manistee National Forests. One of Pinchot's most famous quotes was "The greatest good for the greatest number of people in the long run." Pinchot was friends with Teddy Roosevelt and John Muir. Muir's philosophy was more towards preservation and Pinchot's was more about management. The difference of ideas between these men was the beginning of the controversy between "resource managers" and "environmentalists" that exists today.

In the 1920s and 1930s, many landowners didn't have enough money to pay their property taxes. So, much of the land was abandoned and returned to the government. The government decided to form State and National Forests. National Parks and Wildlife Refuges also began during this time. Some Michigan counties resisted forestry and the creation of public forests. Michigan now has six State Forests and three National Forests, each with its own history. Michigan has the second largest State Forest system in the United States, about four million acres or about a fifth of the Michigan forest today. The National Forests hold about 2.6 million acres.



Michigan's forest dominated the landscape for centuries. In the 1800s, settlement, farming, logging, and forest fires changed the landscape dramatically. Farming mostly failed on the poor sandy soils of northern Michigan and logging removed forest cover. Whatever the reason, the landscape was left

with dead wood or slash and vulnerable to intense forest fires. In 1871, fires burned approximately 2.5 million acres. Over 1 million acres burned in the Thumb in 1881. Fires destroyed trees, habitat, killed wildlife, and accelerated erosion and river/stream degradation.

Roscommon Herald newspaper clipping copied verbatim below:

WON'T TOLERATE FORESTRY PLAN

No signature indicated, written by an attorney of Roscommon County, dated July, 1902.

To the Editor:

The state forestry commission, with about 30 or more visitors, reached Roscommon on Friday noon. Flags were at half-mast on the flagpoles in the village and the reception they received from the people, although civil and without any hostile demonstration, was speakingly that their presence here was not wanted. They were told in unmistakable terms that their forestry scheme cannot and will not be tolerated in this county. Circulars were handed them to that effect. At the post office the finest exhibition of cereals, fruits, etc, all raised on farms in the county, and which exhibition they unwillingly were obliged to visit, must have convinced them that Roscommon County is not a barren wilderness, unfit for cultivation, but a county destined to become a great agricultural center.

Their stay at the village was therefore of short duration. They left for the north, with a "God speed and never come back" as a greeting from our people.

Some influential citizens plainly made them to understand that they had not a foot of land in the county which they could claim as state property.

It is true the state has a lien for taxes on some of the forestry reserve lands, so have the county and townships and school districts. The chancery decrees, on which the lands were sold and bid in by the state, are void and have been so decided by the supreme court. The original owners by paying up the back taxes are the sole proprietors of the lands. Some of those original owners have offered to pay the taxes due on their lands, but the state has invariably refused to accept the money – as by doing so, it would dwarf their forestry policy.

Some of the original land owners are not contemplated to test the matter in court.

"I shall not dwell upon the absurd claim which the state put forth on these lands; this will be left to the court to decide. The people of Roscommon are unanimously against forestry being established in the county and will never allow it. The future will decide. Our motto is: "Down With Forestry!"

In 1887, the State of Michigan established a Forestry Commission to preserve, protect, and restore Michigan's forests. The Commission was later dissolved. In 1889, the Forestry Commission was re-established. The Forestry Commission started nurseries for seedlings and stressed that fire protection was imperative to good forest management. In 1902, Michigan Agricultural College (now Michigan State University) established a Forestry curriculum for education, training, and research. The University of Michigan (1902) and Michigan Technological University (1936) established programs as well.

In 1903, the Forestry Commission established the first state forest in Crawford and Roscommon counties. Over the next 100 years the state forest system grew from 34,000 acres to nearly 4 million acres. It's vegetation changed dramatically as well, transforming from cutover and burned-over abandoned land to a vibrant, healthy, growing forest.

Today, Michigan's landscape is again dominated by forests, covering a little over half the State. These 19.3 million acres of forest land support a diversity of ecosystems, trees, animals, birds, fish, provide outdoor recreation, protect air and water quality, support local communities and forest industry, and enhance the quality of life in Michigan.

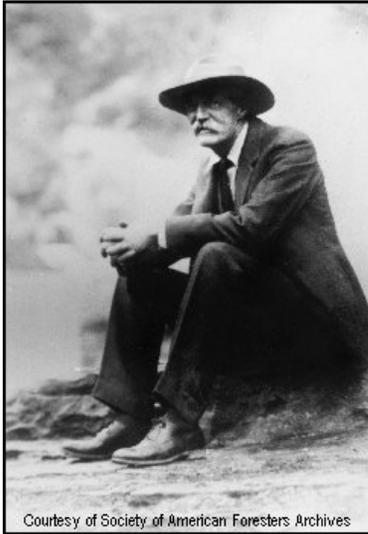
During the 1930s, the economy of the United States was doing very poorly. Many people didn't have jobs and couldn't afford decent housing or

enough food for their families. To help give people jobs and to help forests recover, the federal government started the Civilian Conservation Corps. These CCCers worked on the new National and State Forest lands. They built and improved many National and State Parks. In 1933, the Michigan CCC was organized. Crews planted almost half a billion trees, fought hundreds of fires, built 7000 miles of roads, improved streams, stocked lakes with over 150 million fish, built 222 buildings, surveyed groundwater, conducted wildlife projects, and made the Seney Wildlife Refuge. They put out a giant fire on Isle Royale in 1936. Michigan had over 50 camps with thousands of workers.

Michigan also started forestry schools in the beginning of the 1900s, including the Forestry Departments at the Michigan State University, University of Michigan, and Michigan Technological University and the Wyman School of the Woods.

In the early 1900s, foresters learned a lot about the forests, wildlife, and the land. Through research and experience, we have developed current forest management practices.

Early Leaders in Conservation



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John Muir was a very important person in the early conservation movement in the United States. Muir did not spend much time in Michigan, but spend quite a bit of time in Wisconsin. He was responsible for making Yosemite Valley the first National Park as well as helping to get Congress to authorize Sequoia, the Grand Canyon, Mt. Rainier, and the Petrified Forest as National Parks. He knew Gifford Pinchot and Teddy Roosevelt, two other key people in the conservation movement.

John Muir came to the United States from Scotland in 1849. He lived and traveled in many places in North America and elsewhere. The activities and writings of Muir have inspired many environmental groups, such as the Sierra Club. These groups represent the beginnings of the "environmental movement" or "preservationism" which often conflicts with natural resource management. This early division can be seen in the differences between John Muir and Gifford Pinchot.



Teddy Roosevelt became the 26th President of the United States after William McKinley was assassinated in 1901. Roosevelt was the youngest President ever. He was famous for many things, including his military service, overseeing the construction of the Panama Canal, and his policies on American industries. He is also famous for his strong efforts to promote conservation.

Roosevelt was friends with men like Gifford Pinchot, John Muir, and many other important conservationists of the time. Roosevelt pushed through new ideas like National Parks and Wildlife Refuges. He more than tripled the size of National Forest acreage during his Presidency.

Painting by J.S. Sargent

Michigan Forestry Timeline

| | |
|------|---|
| 1814 | First federal land office |
| 1832 | First commercial sawmill at Menominee River |
| 1835 | The Toledo War |
| 1840 | Commercial copper mining begins |
| 1843 | Beginning of the "copper rush" |
| 1844 | Iron discovered in the U.P. |
| 1854 | Marquette iron range opens |
| 1871 | Fires burn over 2 million acres in central Michigan |
| 1874 | More major wildfires in central Michigan |
| 1874 | First forestry test planting at Michigan State Agricultural College (now MSU) |
| 1879 | More major wildfires in central Michigan |
| 1873 | 1,600 sawmills in Michigan |
| 1881 | Fires burn a million acres in the "thumb" |
| 1887 | First sanctioned Forestry Commission |
| 1888 | First forestry convention in Grand Rapids with Bernard Fernow |
| 1888 | First out-state test tree planting by W.J. Beal at Grayling, Oscoda, and Harrison experiment stations |
| 1891 | More major fires in the "thumb" |
| 1889 | First railroad logging in Ontonagon County |
| 1890 | Peak year of lumber production |
| 1893 | State gets power to takeover cutover lands |
| 1895 | First State Park at Mackinac Island |
| 1897 | Logged volume reaches 162 billion board feet |
| 1899 | Michigan Forestry Commission |
| 1900 | First State lands set up for reforestation. Over half of Michigan deforested by this time |
| 1902 | Forestry Departments at MSU and U of M |
| 1903 | First State Forests in Roscommon & Crawford Counties |
| 1904 | Huron National Forest created |
| 1904 | First Tree Nursery at Higgins Lake |
| 1905 | U.S. Forest Service is Created |
| 1908 | Huge Metz fire in the Lower Peninsula |
| 1909 | Wyman School of the Woods Huron & Hiawatha (part) National Forest Created |
| 1913 | State reforestation policy provides tree seedlings |
| 1920 | Hardwood harvest first exceeds pine harvest |
| 1921 | Michigan Department of Conservation (now DNR) |
| 1925 | Commercial Forest Act created |
| 1931 | Isle Royale National Park |
| 1931 | Orders approved for the beginning of the Ottawa, Hiawatha, and Marquette National Forests |
| 1932 | From 1921-1932, the state received nearly two million acres of tax delinquent land |
| 1933 | Michigan Civilian Conservation Corps Begins |
| 1933 | Manistee National Forest Created |
| 1934 | Public schools begin to teach conservation |
| 1935 | Seney Wildlife Refuge Created and Toumey Tree Nursery Established |
| 1936 | Forestry Department at MTU (Houghton) |
| 1936 | Worst wildfire year in the U.P. |
| 1949 | Since 1931, 642 school forests & 223 community forests created |
| 1950 | Chainsaws regularly used |
| 1960 | Logging camps become history |
| 1960 | Mechanized logging machinery |
| 1968 | The Department of Natural Resources created from the Conservation Department |
| 1995 | Department of Environmental Quality created from the DNR |
| 2000 | Michigan "Right to Practice Forestry" Act passed |
| 2003 | Millions of corporate forest lands begin ownership changes |
| 2006 | State Forests become certified by third party auditors |

MICHIGAN'S CIVILIAN CONSERVATION CORPS

Roosevelt's Tree Army Michigan's Civilian Conservation Corps

*by Roger L. Rosentreter
From the Michigan Historical Center Website*

On 2 May 1933, two hundred young men from Detroit and Hamtramck arrived at an isolated spot in the Hiawatha National Forest, west of Sault Ste. Marie. They set up tents and dubbed the area Camp Raco. Designated Company 667, the Detroiters had been outfitted, inoculated and briefly oriented at Camp Custer in Battle Creek before being shipped to the Upper Peninsula. Within months there were forty-one similar camps across northern Michigan housing nearly eight thousand young men. The Civilian Conservation Corps (CCC) had come to Michigan.

The Civilian Conservation Corps was President Franklin Roosevelt's personal creation. As governor of New York, he had introduced a broad reforestation scheme using ten thousand men who were on public relief to plant trees in 1932. In his July 1932 Democratic Party presidential nomination acceptance speech, he had proposed employing a million men in forest work across the nation.

Five days after his 4 March 1933 inauguration, Roosevelt met with the secretaries of Agriculture, Interior and War to outline his proposed conservation relief measure. On 21 March he submitted the Emergency Conservation Work bill to Congress. The proposed civilian conservation corps would recruit 250,000 unemployed young men to work on federal and state owned land for "the prevention of forest fires, floods, and soil erosion, plant, pest and disease control." In his message to Congress, Roosevelt declared that the CCC would "conserve our precious national resources" and "pay dividends to the present and future generations." "More important," he added, "we can take a vast army of the unemployed out into healthful surroundings. We can eliminate to some extent at least the threat that enforced idleness brings to spiritual and moral stability."

On 22 March the New York Times predicted that Roosevelt's plan would not be received "with zealous approval in Congress" nor "appeal strongly to large numbers of the very men whom President Roosevelt hopes to benefit." The Times was never more wrong. After little debate and no real opposition, Congress overwhelmingly approved the relief measure. On 31 March 1933, Roosevelt signed the bill into law, and six days later he ordered the formation of the CCC. His goal was to have 250,000 men in the forest in three months.

The Civilian Conservation Corps administration consisted of a director, Robert Fechner, and an advisory board of representatives from the Departments of War, Agriculture, Interior and Labor. With the help of local boards, the Department of Labor selected the CCC enrollees. The War Department housed, clothed and fed the men, and organized and administered the camps. The Departments of Agriculture and Interior planned the work projects, recommended camp locations and supervised the work programs.

One often overlooked aspect of the birth of the CCC was the contribution of Michigan Senator James Couzens. On 23 January 1933 the Republican introduced a bill authorizing the U.S. Army to house, feed and clothe unemployed, single males. Couzens proposed that the army care for up to 300,000 needy men on its military bases. Secretary of War Patrick J. Hurley urged that "the aims of the bill could be better and more economically accomplished by localizing the problem in our cities, where a large majority of these young men are now found," and Couzens' bill was shelved. Nevertheless, the bill introduced the concept of army assistance with relief schemes.

On 17 April 1933 the nation's first CCC camp, Camp Roosevelt, opened in the George Washington National Forest in Virginia. By 1 July 1933 the goal of enlisting a quarter million enrollees, in over 1,300 camps, had been accomplished. At that time, it was the fastest large-scale mobilization of men (including World War I) in U.S. history.

In Michigan several factors speeded CCC organization. The hasty mobilization of the CCC had caught private industry unprepared, and manufacturers were swamped with demands for axes, hoes and shovels. In Michigan, however, the forestry schools at Michigan State College and the University of Michigan lent tools to get the state's first CCC camps going. Many of the CCC enrollees in Michigan were natives of the state and did not have as far to travel as did the enrollees from the urban areas of the East who served in the Far West. Furthermore, in the fall of 1932 the Michigan Department of Conservation (now the Department of Natural Resources) had made a survey to determine what projects might be undertaken if federal funds were allotted for conservation work. Throughout the nine year existence of the CCC, the Department of Conservation worked closely with the federal agencies in approving and inspecting work projects. The department also managed many state CCC camps. (The others were under the aegis of the U.S. Forest Service, the National Park Service and the U.S. Biological Survey.)

The average Michigan CCC enrollee began his CCC experience by applying at a local selection board. "Junior" applicants, who composed 90 percent of the corps had to

be single males between seventeen and twenty-three years old, unemployed, in need, U.S. citizens and not attending school. They had to be capable of physical labor, not too short (below 60 inches), not too tall (over 78 inches), nor too light (less than 107 pounds). Other conditions that might disqualify an applicant included varicose veins, venereal disease and a lack of at least "three serviceable natural masticating teeth above and below."

If chosen, a candidate enrolled for six months and agreed to send at least \$22 of his \$30 monthly wage home to his dependants. He underwent a physical examination and vaccinations, took the CCC oath and received his clothing and supplies. His clothing allotment included shoes,

Despite the army's role in administering the CCC, the camps were civilian rather than military in character. There were no military drills, no manuals of arms and no military discipline. An enrollee could be verbally disciplined or given KP duty. If he was AWOL or was caught stealing, he could be fined a maximum of \$3.00 a month or given a dishonorable discharge.

Approximately ten percent of CCC enrollees were unemployed war veterans. Veterans had to meet the same physical conditions as juniors, except for the age limit. They formed separate companies; in Michigan there were at least five veterans' camps. Michigan veterans were also kept on the active list for state employment vacancies. Besides



CCC Camp at Cusino, Near Shingleton

socks, underwear, a blue denim worksuit and an old army olive drab uniform for dress purposes. He also received a toilet kit, a towel, a mess kit, a steel cot, a cotton mattress, bedding and a round metal disk with his service number inscribed on it.

Initially, CCC camps were established as tent communities, but as winter approached, permanent structures were usually constructed. In 1936 camps were standardized to include four or five barracks, a mess hall, an officers' quarters, a schoolhouse, a bathhouse and latrine, a doctor's office and dispensary, and various other service buildings. The buildings' exteriors were creosoted or covered with tar paper. The interiors were simple; the floors, wooden. Although the buildings had electricity, they were usually poorly lit. The enrollees added exterior amenities, like gravel-lined walkways and flowers.

A regular army officer or a reserve officer called to active duty commanded the camps. The commander's staff included a junior officer, a medical officer, several members of a technical agency from the Agriculture or Interior departments, sometimes a chaplain and, after 1934, an educational advisor. Work details were commanded by a project superintendent and assisted by area residents known as "local experienced men."

performing various forest duties, veterans in the CCC served communities near their camps as color guards and firing squads at funerals and on other occasions.

An enrollee's day began with reveille at 6:00 A.M. After calisthenics came breakfast. CCC food was plain, nourishing and served in abundant quantities. CCC Director Fechner described camp food as "wholesome, palatable, and of the variety that sticks to the ribs." After breakfast, enrollees policed the grounds and barracks before roll call and inspection. By 7:45 A.M. the men were on their way to their work projects. Lunch was served in the field and lasted one hour. By 4:00 P.M. the men had returned to camp for an informal recreation period that lasted until dinner, which was served at 5:30. After dinner, enrollees either attended classes or sought entertainment in nearby communities. There were no restrictions about leaving camp in the evening as long as the men were back for lights out at 10:00 P.M.

In June 1935 the New Republic dubbed the Civilian Conservation Corps "Roosevelt's Tree Army." Since most of the Michigan CCC camps were in national and state forests, enrollees planted seedlings, fought forest fires, eradicated diseases especially blister rust, which affects white pines- and built roads, trails, towers and firebreaks to aid in the

prevention of forest fires. During its first twenty-four months, the Michigan CCC constructed over 3,000 miles of truck trails, spent 54,000 man days fighting fires, assembled 8 lookout towers, built 275 miles of firebreaks and reduced fire hazards on some 40,000 acres. Reforestation also required the establishment of nurseries. By 1936, one million hardwood seedlings were ready for planting.

Once it became certain that the CCC would be more than a temporary agency, Michigan officials undertook more complicated projects. Enrollees built two bridges, one 103 feet long over the Muskegon River, and another 170 feet long over the Manistique River. They improved hundreds of miles of Michigan game-fish streams and built log structures called deflectors to maintain pools for trout. During the first three years of the CCC, over 75 million fish were reared in hatcheries and distributed in lakes and rivers.

CCC activities extended to the Michigan state park system. The seemingly endless list of improvements includes a bathhouse at Ludington State Park, a 40-by-80-foot limestone picnic shelter at Indian Lake State Park and a 29-by-43-foot fieldstone caretaker's residence at Wilson State Park, which was equipped with running water, lights and other "modern conveniences."

The Michigan CCC also conducted groundwater surveys on several million acres of Michigan land, prepared five hundred sample rock trays for distribution to Michigan schools and, in cooperation with Michigan State College, prepared twenty farm woodlots to show farmers how to properly thin wooded areas.

The Michigan CCC also engaged in numerous wildlife projects. At Camp Cusino near Shingleton, an extensive moose research project—the only one of its kind in the nation—took place. The CCC moved moose from Isle Royale to the Cusino State Game Refuge where studies determined the animals' food requirements, mating habits and disease resistance. An experimental deer-feeding project was also conducted at Cusino.

Not far from Cusino, the men of Company 3626 established the Seney National Wildlife Refuge in 1935. These members of Camp Germfask, the only U.S. Bureau of Biological Survey camp in Michigan, transformed 95,000 acres of marshland into a domicile for migratory wildfowl. A system of dams, spillways, ditches, dikes and pools was built, and hundreds of acres of millet, celery and wild rice were planted as food for birds. More heavy machinery was operated at Camp Germfask than at any other Michigan CCC camp.

Most Michigan CCC camps were in either national or state forests. The state's only National Park Service camps were on Isle Royale, which had been designated a national park in 1931. On 13 August 1935, an advance party of

twenty men from Company 2699, led by Captain Edward S. Thomas, arrived off the island in Siskiwiit Bay. Forced to wade ashore, the men cleared a living area for the remainder of the company, which arrived later that month. The 2699th completed Camp Siskiwiit and performed general forestry work before returning to the mainland in October. The following spring the company returned to Isle Royale and constructed Camp Rock Harbor at present-day Daisy Farm Landing.

On 23 July, forest fires fed by strong winds broke out on the island. They created so much smoke that vessels along the Keweenaw shoreline were forced to sound their foghorns. As the fires worsened, more men from CCC camps in Michigan and Wisconsin were shipped to the island. In mid-August the conservation editor of the Grand Rapids Press, Ben East, who spent three days on the island, reported that the eighteen hundred men fighting the fires were doing a remarkable job against enormous odds. "I'm not in any sense a trained firefighter," East observed, "but I do know 'guts' . . . and the CCC lads on Isle Royale have 'em."

Described by East as "the largest fire army" to ever fight a single blaze in Michigan, the men faced numerous challenges. The island lacked roads, and its rocky terrain made plows and tractors useless in establishing firelines. The men dug one hundred miles of trenches by hand with axes and shovels. There was little available sand, and as East reported, "The soil is leaf mold and humus, lying in a shallow layer over clay and rock. The soil itself burns." While there was an abundance of water, portable pumps were required to drive the water across ridges and swamps to the fires. (Eighty-pound gas tanks were carried inland to keep the pumps running.)

The CCC enrollees fought the fires in twelve-hour shifts. The day shift awoke at 3:30 A.M., ate breakfast and walked several miles inland to relieve those who had fought the fires by lantern light throughout the night. Except for a lunch break, the crew worked until relieved by the night crew at 6:00 P.M. East noted that one crew of three hundred men had continued at this pace for nineteen days without a break. The fire fighters endured food shortages, rotting food stores and poor sanitary conditions that resulted in a mild dysentery epidemic. In spite of these setbacks, they checked the fires, which destroyed 35,000 of the island's 132,000 acres. According to East, without the efforts of the CCC men, "some of the finest scenic spots on the Island would have been laid bare."

One hundred men volunteered to spend the winter of 1936-37 on Isle Royale eliminating fire menaces. With the safety of winter snows, the men burned the slash and half-burned trees from the summer firelines. Although Isle

Royale was blocked by ice for up to five months, the enrollees were not "utterly isolated." A ski-equipped airplane was available for monthly trips to the mainland and for emergencies. The CCC remained on Isle Royale until September 1941.

Working in the woods and around machinery was dangerous. Wallace J. Blair remembers the death of one of his buddies while they were dynamiting stumps at Camp Johannesburg on Bear Lake. Forest fires also took a toll. In May 1937, three CCC camps were brought in to fight a fire in the Huron National Forest. One foreman, Andrew D. Lindgren, and his men were trapped by the blaze. Lindgren directed his men to safety, but failed to escape himself. He posthumously received the North American Forest Fire Medal for bravery.



An unidentified group of CCC enrollees pose for a photograph.

"Our greatest task is to put people to work. This is no unsolvable problem if we face it wisely and courageously. It can be accomplished in part by direct recruiting by the Government itself, treating the task as we would treat the emergency of war, but at the same time, through this employment, accomplishing greatly needed projects to stimulate and reorganize the use of our national resources."

Franklin D. Roosevelt
4 March 1933

The CCC camps balanced work with recreation. Each camp had a canteen where enrollees could buy film, candy, razor blades, soda pop and 3.2 beer. Profits from the canteens were used for such camp extras as billiard tables. Each camp also had a library with an average of 1,000 books and magazines. In 1937 Camp Germfask boasted over 4,000 volumes. Most camps published a camp newspaper. In 1935 the *Mockingbird*, the newspaper at Camp Steuben, was judged the best CCC camp newspaper in the nation.

Many camps fielded teams in basketball, baseball, six-man football, ice hockey and boxing. Near St. Ignace, Company 3631 constructed facilities for tennis, volleyball, horseshoes and track and field. In 1936, Company 3032 at Camp Manistique won the Fort Brady District ice hockey and basketball championships. The baseball team also tied for the championship of the Central League—an independent league "which played high class baseball." Boxing, too, was popular. Black enrollees at Camp Walkerville in Bitely held Friday night fights that often drew crowds of up to 2,000 area residents. And Al Fehler of Company 3601 near Ironwood fought his way to the Golden Gloves Tournament in Chicago. Others from Fehler's camp skied in a local tournament with "several of the best jumpers in the world."

For more subdued recreation, enrollees at Camp Escanaba River had an orchestra that performed twenty-six

times on radio station WBEO in Marquette. And in the summer of 1936 the nine-piece Camp St. Martins Drum and Bugle Corps played at St. Ignace, Newberry and the U.P. State Fair in Escanaba. At the fair the corps won \$25.00 and an invitation to the Michigan State Fair in Detroit. However, work projects forced it to decline this honor.

Trips into nearby towns for Saturday night dances were such an integral part of CCC recreation that ballroom dancing was taught at the camps. (Half of the enrollees entered the camps unable to dance.) Enrollee Bernard Bridges recalled that many of the men at Camp Big Bay, near Marquette, spent Saturday nights at the tavern in Hungry Hollow. There, nickel-a-glass beer sometimes heightened antagonism between local lumbermen and enrollees trying to impress the settlement's dozen eligible

women.

Since enrollees had no cars, they went to and from town by truck. According to Ralph Newman, "the most memorable thing about the trips was the awful cold and darkness sitting in the backs of the trucks without heat." If an enrollee missed the truck, he had to walk or hitch a ride. Author Charles Symon tells of two Upper Peninsula enrollees who missed the truck back to camp and were still missing the next morning. A project superintendent and an officer found them stranded in a jack pine where they had "escaped from wolves." Just then a loon cried out from a nearby pond. One enrollee jumped into the officer's car, and the other began to climb the tree again.

Believing that CCC enrollees could become "better and more employable citizens" through training and education, President Roosevelt called for a nationwide, Washington-directed CCC education program in late 1933 to replace local camp efforts. The new program added an educational advisor, usually an unemployed male teacher, to each camp. The advisor, the company commander and the camp's technical service people tried to offer a comprehensive educational program. Classes, held at night to avoid interfering with work projects, included academic, vocational and job training, as well as health, first aid and lifesaving. Attendance was voluntary.

The educational advisors faced many problems. Materials were inadequate, and some camp commanders were uncooperative. Students ranged from men with no formal schooling to those holding university degrees. One Michigan educational advisor recalled reading to illiterates and teaching foreign languages and welding "among other things."

In 1937 the CCC began requiring that enrollees spend ten hours a week taking academic or vocational training classes. Vocational subjects ranged from automotive mechanics and carpentry to drafting and cooking. Proficiency certificates were awarded upon completion of a course. Michigan officials reported that the average CCC camp provided work experience and supplemental training in "at least 30 different civilian payroll jobs."

Michigan was a leader in developing CCC educational programs. Through an arrangement with the Michigan superintendent of public instruction, in March 1935, seventy-four CCC enrollees from eighteen camps across the Lower Peninsula received their eighth-grade diplomas at commencement exercises at Alpena, East Tawas, Manton and Baldwin. By June 1940, nine hundred eighth-grade diplomas had been issued in the program, which was one of the first of its kind in the United States.

Michigan CCC members could also take high-school and college-freshmen correspondence courses through the University of Michigan. By late 1936 correspondence study centers with supervisors were operating in at least twenty-seven Lower Peninsula CCC camps. The men paid fifty cents for each course plus the cost of textbooks. As of November 1936, over one thousand CCC enrollees in both the Upper and Lower peninsulas had participated in high-school correspondence classes, and at least 144 were taking college courses in the Lower Peninsula.

Nationally, 90 percent of all CCC enrollees took classes. Over 100,000 men were taught to read and write. Over 25,000 received eighth-grade diplomas, and 5,000 earned high-school diplomas. During its later years, the CCC annually produced 45,000 truck drivers, 7,500 bridge builders and 1,500 welders. Still, the educational program of the CCC was not an unqualified success. Historian John Salmond has noted that "academic courses, while doubtless interesting in themselves, were of limited practical value to youths who would almost certainly lead non-academic lives." Salmond also questioned "whether instruction in digging ditches and building dams was fitting the enrollees for life in an increasingly urbanized society."

There were other problems in the CCC. Racial discrimination in recruiting enrollees was prohibited. But this did not keep the CCC, with the acquiescence of President Roosevelt, from minimizing black participation when

confronted with white hostility. In 1934, Director Fechner ordered that strict segregation be maintained in all companies; and after receiving protests over the location of black CCC camps near various communities, he curtailed black enrollment in 1935. He complained in late 1934, "There is hardly a locality in this country that looks favorably, or even with indifference, on the location of a Negro CCC camp in their vicinity." Nationally, almost 200,000 of the 2.5 million CCC enrollees were black.

Blacks composed only 3.5 percent of Michigan's population in the early 1930s, and some early state CCC camps were integrated. But CCC annuals for 1937 show no integrated companies.

Michigan's first all black CCC company, the 670th, was created in late April 1933. The company, located at Camp Mack Lake near Mio, worked on forestry projects in the Huron National Forest. In 1935 the 670th relocated to Camp Bitely near Freesoil. Three other black companies--the 2693th, 2694th and 2695th--were created in 1935. At Camp Axim, the 2695th helped build the Caberfae Ski Area.

In April 1933 the CCC program was extended to American Indians. Michigan's lone Indian CCC camp, Marquette, operated in western Chippewa County, north of Eckerman. Dedicated on 25 April 1935, Camp Marquette served Indians from Michigan and several other Great Lakes states. The Indians were not governed by the same administrative rules as other CCC enrollees, and there was no age limit for them. Indians at Camp Marquette did a variety of jobs, including road construction, timber stand improvement and tree planting. One worker allegedly remarked, "The white man stole our land in the first place, cut off the timber, and now they are making us plant it again."

In his 4 January 1935 message to Congress, President Roosevelt proposed the extension and enlargement of the CCC. With overwhelming congressional approval, the CCC grew to over 500,000 by September 1935. During the summer of 1935, there were 103 camps in Michigan, and by November, enrollment had peaked at almost 17,000.

In 1936, with an election looming, President Roosevelt sought to reduce federal expenditures. He called for a reduction of the CCC to 300,000 by 1 July 1936. Also subject to reelection, congressmen opposed closing camps in their districts. They approved additional funding and slowed the president's efforts to reduce the corps. Nonetheless, the CCC never again exceeded its 1935 enrollment.

*President Roosevelt's 1936 bid to reduce the CCC revealed the extensive popularity of the corps. In *The Democratic Roosevelt*, Rexford Tugwell claims that the CCC "became too popular for criticism." Even 1936*

presidential nominee Alfred M. Landon endorsed the CCC and promised to continue it if elected. The *Detroit News* admitted that though the CCC was expensive, "the prompt and unmistakable dividends it has paid, both in valuable work accomplished in the nation's forests and in the physical and moral benefits accruing to the young men who have enlisted," made it "a real investment in the National well-being." In July 1936, one poll found that 82 percent of Americans supported the CCC. Three years later, another poll listed the corps as the New Deal's third greatest accomplishment.

Michigan communities fought to keep their camps. In September 1937, Iron River businessmen sent twenty-nine separate telegrams, as well as a petition, to Washington officials to protest the closing of a nearby camp. During the winter of 1938, the Menominee Chamber of Commerce pleaded with President Roosevelt to keep an area camp open.

Each camp spent an estimated \$5,000 per month in the local market to buy food stuffs and supplies. Moreover, camp members frequently aided communities during emergencies. Enrollees logged hundreds of man-days searching for missing persons, and the men at Camp Pori near Mass City helped local law enforcement officials apprehend a murderer. Camp Higgins Lake enrollees fought two fires, saving area farm buildings and homes. Paul Gilmet, who served at Camp Wellston, aided the camp doctor delivering a baby; and on 31 July 1936, enrollee Earl Mitchell of Iron Mountain saved a drowning woman in Crooked Lake near Watersmeet. After one of the worst snow storms of the 1935-36 winter, black enrollees at Camp Walkerville "worked hand in hand" with area residents opening roads and hauling foodstuffs and medical supplies to the needy.

The benefits of the CCC extended well beyond the camps' immediate localities. By the end of its first eighteen months, the Michigan CCC was sending \$112,000 monthly to 4,500 families. Moreover, as one mother explained to CCC Director Fechner, the corps was praiseworthy because "the boys are safe there. They are young and inexperienced and need someone reliable to teach them and I think the discipline and strictness are what they need now in their teenage period."

Because enrollees learned basic work skills, industrial safety, good work attitudes and physical conditioning, businessmen also supported the corps. Appearing before a U.S. Senate subcommittee in June 1941, C. Don McKin, executive vice-president of the National Standard Parts Association in Detroit, declared, "We have come to feel that the Corps is one of the finest agencies that has come out of the Administration. It has a purpose and refreshingly, from a

businessman's standpoint, it has been managed on a business basis and has the fundamentals which inspire the confidence of the businessmen."

Surprisingly, the corps was not popular among some Michigan congressmen. In 1937, President Roosevelt sought both to renew the CCC for two more years and to make it a permanent agency. Congress opposed the notion of CCC permanency, primarily because the administration failed to adequately address the problems of a long-term budget and improved organization. One of the more vocal opponents of even extending the corps was Michigan Congressman Fred Crawford. On 11 May, Crawford charged that the CCC took young men out of the rural communities and surrounding areas and transported them "to some camp in the woods to participate in a face-lifting operation on Mother Earth, not necessarily essential at this time when toilers are needed to help produce wheat and staples for the food basket of the Nation." The Saginaw Republican added that the corps cost too much and contributed to the national debt. He concluded, "I would rather have a boy of mine ... grow up in private industry and agriculture than in any C.C.C. camp. . . . I believe the proper place is on American farms and in American industries under private control." Republican Congressman Earl C. Michner of Adrian agreed, observing that it was "practically impossible for farmers to find a former CCC enrollee to work on a farm." Michner attributed this to the fact that the farm work was "too hard" and the hours "too long" for the former enrollees. The House voted to renew the CCC by a margin of 389 to 7.

During the summer of 1939, Congress extended the life of the CCC until 1 July 1943. In Michigan, 46 camps operated with approximately 7,400 enrollees. Nationally, corps enrollment stood at 300,000 enrollees and 1,500 camps. One Michigan CCC project then nearing completion was the Muskegon River Dam, a five hundred-foot-long structure described as the "largest and one of the most important Michigan State CCC projects." Over one hundred tons of steel were used to build the dam, which flooded 2,500 acres to create a breeding place for wild waterfowl.

By the end of 1939, the death of Director Fechner, a decline in morale among CCC supporting agencies, uncertainty due to the outbreak of war in Europe and proposed budget cuts foreshadowed trouble for the CCC. Enrollee desertion had increased, and as the economy improved, better quality candidates were no longer available or interested in the CCC. In response to the worsening international situation, noncombative military training was made a mandatory part of CCC education in 1940.

At the beginning of 1941, the CCC had 300,000 enrollees. Ten months later it had only 160,000. In Michigan

the 46 camps and 9,400 enrollees of 1941 shrank to 14 camps and 2,600 enrollees by mid-1942. In May 1942, the Detroit Free Press reported that 51 percent of the public favored the abolition of the corps. National polls yielded similar results.

Nevertheless, President Roosevelt fought to retain the CCC. In May he asked for \$50 million to keep 150 camps open. On the House floor Michigan Representative Albert J. Angel led the forces favoring abolition. Declaring that the CCC had done "a great deal of good," in spite of "a great deal of waste and extravagance," the Muskegon Republican proclaimed that the corps was no longer necessary. Congressman Clare Hoffman of Allegan, a vocal New Deal opponent, added, "We did not have the power to send aid, not even food and medicinal supplies to the men in Bataan . . . yet we have money to carry on this C.C.C."

On 5 June 1942 the House defeated the CCC appropriation. After a House/Senate conference, Congress provided \$8 million to liquidate the CCC. The Civilian Conservation Corps was dead.

The accomplishments of the Civilian Conservation Corps are astounding. In the nation's first massive effort to restore its natural resources, the corps employed over three million men. These men planted 2.3 billion trees, spent 6.4 million man-days fighting forest fires and eradicated diseases and pests on 21 million acres of land.

Michigan's 102,814 CCC participants--eighth highest among all states--occupied an average of fifty-seven camps annually. Only five states had a higher average. More impressively, Michigan enrollees planted 484 million trees--more than twice as many as any other state. They spent 140,000 man-days fighting forest fires, planted 156 million fish and constructed 7,000 miles of truck trails, 504 bridges

and 222 buildings. They revitalized the Michigan State Park system, established Isle Royale National Park and built campgrounds in Michigan's national forests. Total CCC expenditures in Michigan reached \$95 million, and enrollees sent over \$20 million to their dependants.

The nation's defense potential was also aided by the corps. By 1942 many young CCC men had learned how to take orders, the rudiments of sanitation, first aid and personal cleanliness, and other skills that were directly transferable in time of war.

Described by John Salmond as a "conservator of human beings," the Civilian Conservation Corps improved the morale, health and education of millions of young men. Former enrollees offer many positive memoirs. William T. Lawson of Traverse City met his wife while stationed at Camp Kalkaska; Oliver Edwards came "face-to-face" with his first black bear while at Camp Kentucky; and Grand Rapids enrollee Sigmund Palaseic, who joined the CCC because he was "starving," ate his first meals in disbelief that "there was that much food in the world." Less tangible was the sense of pride in their country instilled in the enrollees. As one enrollee observed, "As an Americanizing influence, the CCC is perhaps without equal."

Michigan's CCC camps have disappeared, but the legacy of the corps--the forests, parks and conservation efforts--remains. As President Roosevelt told the enrollees in an April 1936 radio address, "The promptness with which you seized the opportunity to engage in honest work, the willingness with which you have performed your daily tasks and the fine spirit you have shown in winning the respect of the communities in which your camps have been located, merits the admiration of the entire country."

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MICHIGAN FORESTS TODAY

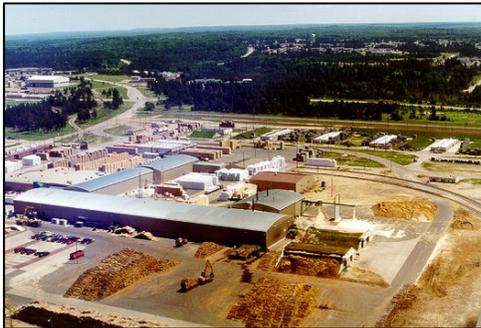
These days Michigan's forest are in GREAT shape! Natural recovery and a WHOLE LOT of work by foresters has provided us with an exceptional natural resource. Michigan is a way cool, green place to be.



Michigan Northern Hardwood Forests

Forests cover about half the State, with most of it in the northern two-thirds of Michigan. Agriculture and cities have replaced most of the forest on the other half of the State. The timber volumes have grown steadily since the logging era. The forest is filled with animals, plants, clean water, protected soils, and a zillion ways to have fun.

Michigan forest industry has changed, too. We still have hundreds of loggers and the forest industry is a major Michigan business, worth over nine billion dollars. Wow! But today, sustainable forestry is the name of the game. Not only is the wood supply continuing to increase, but foresters are concerned about more than just wood.



Modern Michigan Sawmill

Foresters consider many things when deciding what to do with a piece of forest. Wildlife habitat, water protection, recreation, how timber sales look, biodiversity, and fire protection are some of



Nesting Woodcock

the considerations. Most important, foresters are concerned about regeneration and making sure our forests stay healthy and productive. Forests are part of the ecosystem landscape and are managed with the big picture in mind. Forest management systems have been developed over the last 75 years that take into account a lot of science and biology. These systems also account for changes in the way the public views land and forests.

Using forests is unbelievably important to all of us, even though we might not think about it. Trees become part of over 5,000 different products in the United States. Each year, every person uses a tree 100 feet tall and about 16 inches in diameter. In Michigan alone, that's almost 10 million of those big trees each year! And wood is an environmentally friendly raw material. It's cheaper than most other raw materials, uses less energy to process, and most of all . . . it's RENEWABLE!



Large White Oak

But never forget that wood is just a part of the forest we use every day. We also hunt, fish, snowmobile, mountain bike, drink clean water, camp, hike, and enjoy the Fall colors. Forests provide oxygen we breathe and help clean the air. Many people also gather things from the forest, like berries, nuts, mushrooms, medicines, craft items, and lots more stuff. Managing our forests is the best way to make sure there will be plenty to go around for the future.



Camping, A Favorite Michigan Activity

A Short History of the Michigan State Forests: The Early Days

By Mike Moore

On my office wall I have a photograph of Gifford Pinchot, first American forester and one of the seven founding members of the Society of American Foresters. I often think of his writings, especially in *Breaking New Ground* where he wrote. In 1876, my Father took me to the Centennial Exposition at Philadelphia, held to celebrate the hundredth birthday of the richest forest country on earth. It contained no forest exhibit of any sort or kind except for the single State of Michigan. The State Centennial Board of Managers published a description of that exhibit. It states there were more than 1200 specimens on display comprising trunks and cross-sections of trees, blocks, boards, natural curiosities in growth, shrubs, seeds. It also stated that accompanying the Exposition Catalogue was a valuable paper by Professor W.J. Beal, of the State Agricultural College, and quotes from the paper; *"To the best of my knowledge, lumbering has always been overdone in this State."*

Michigan's forest heritage dates to before Statehood. The first Federal Land Office was established in Michigan in 1814 and the first mill in the Upper Peninsula was built by the US Army at Sault Ste. Marie in 1822. It was during this period that settlers began to move into Michigan, especially following the opening of the Erie Canal in 1825. The landscape was covered with pine.



The Government Land Office survey of Michigan was completed in 1853. White Pine logging started in the mid 1830s and reached its zenith around 1900. The rapid and thorough exploitation of this resource led to the establishment of the Independent Forestry Commission in 1887. This commission consisted of the members of the State Board of Agriculture and its duties were to institute an inquiry into the extent to which the forests of Michigan were being destroyed by fires, used by wasteful cutting for consumption or for the purpose of clearing lands for tillage or pasturage. Also as to the effect of diminution of the wooded surface of the lands upon ponds, rivers and water power of the State, and in distributing and deteriorating the natural conditions of the climate. Also as to the protection of denuded regions, stump and swamp lands. No small task! The Commission issued a report in 1888 and a forestry convention was held at Grand Rapids the same year, under the auspices of the commission. Numerous interesting papers were read and addresses made. Among them was an address by Professor B. E. Fernow, in which he called for strong legislation to protect and manage forest land but he warned that ignorant legislation is criminal legislation. Unfortunately the law that created the Forestry Commission was repealed in 1892, apparently in an effort to save money. Later, in 1893 a General Property Tax Law was enacted. It gave taxing power to the state and enabled

foreclosure on tax delinquent cutover lands. This Act was to have a major influence on the establishment and growth of Michigan's State Forests.

In the fifty-sixth annual report of the Commissioner of the Land Office (William A. French) of the State of Michigan for the fiscal year ending June 30, 1898 it states Michigan should be foremost of all states of the United States in encouraging forestry, yet we find that little, if any, attention is being given to the preservation or restoration of our forest, which have been a leading factor in producing the wealth of the State.

The State Forestry Commission was reestablished by law in 1899. Public officials began to recognize that some land should be retained in public ownership. Logged over lands were considered worthless to their owners. Many acres reverted to State ownership. Farmers and settlers who tried to make the northern sandy soil lands productive for agriculture were largely unsuccessful and most farms failed. Forest fires devastated thousands of acres.

In 1903, 34,000 tax reverted acres in Roscommon and Crawford counties were set aside for forestry purposes, and were dedicated as the Higgins Lake, and Houghton Lake State Forests. Reforestation by the planting of nursery stock was begun in 1904, with the first stock coming from commercial dealers.

Professor Filibert Roth was appointed Forest Warden in September, 1903 and compensated at the rate of \$1,000 per year. He was authorized to negotiate for additional lands, to give free permits for wild hay, to dispose of dead and down timber (valued under \$10 and for domestic use) and to employ forest rangers. Forest fire control became a major item of concern, especially through the construction of fire lanes.

In 1904 Filibert Roth authored the Michigan Forest Reserve Manual for the Information and Use of Forest Officers. In this Manual, he outlines the objects of the Forest Reserves: 1. To protect and improve the forest cover and thereby produce a crop of timber on lands which are largely unsuited to other kinds of crops. 2. To encourage settlement by lessening the dangers from fire and by restoring to the land the attractive and useful cover. 3. To encourage by direct help and good example, better protection of private lands. 4. To regulate the use of these lands and such materials as they now offer, especially to regulate the grazing upon these lands to avoid useless, destructive overgrazing. 5. To assure to the county and town at least some return in place of regular taxes. The law now provides that the State through its Forestry Commission may contribute to the maintenance of roads and schools in the towns where the Forest Reserves are located. 6. To furnish employment in the protection and care of the forests.

Warden Roth summed up his thoughts on the actions of the employees of the Commission: Keeping in mind the objects and purposes of the reserves and their forests, it is clear that the first and foremost duty of every forest officer is to care for the

forest, and every act, every decision he is called upon to make, should be guided by the thought: Will it improve and extend the forest?

In 1907 Governor Fred M. Warner appointed a special Commission of Inquiry on Tax Lands and Forestry. Among other things the Commission recommended a reorganization of state government agencies related to forests and forestry. This resulted in Act 289 of Public Acts of 1909 establishing a Public Domain Commission. One of their first actions was to hire Mr. Marcus Schaaf as State Forester. Mr. Schaaf was a graduate of Dr. Carl A. Schencks Biltmore School of Forestry located in Pisgah, North Carolina. Additional Forest Reserves opened under Mr. Schaafs leadership include Fife Lake and Lake Superior in 1913, Ogemaw in 1914, Presque Isle in 1915, and Alpena in 1916. The State Forest System was underway. By 1916, of the some 600,000 acres in state ownership, seven state forests had been designated, including one in the Upper Peninsula for a total of 113,271. The remainder of the State owned lands were undedicated. Originally the duties of the forest officers were fire protection, land surveying and tree planting.

Significant changes occurred in the ensuing decades. The Department of Conservation was created in 1921, the Land Economic Survey began work in 1922, and massive tax reversions of land became commonplace in the 1930s. By 1938, 12 State Forests encompassing 1,049,042 acres were managed for servicing of recreation and the production of timber. State ownership continued to grow, both by reversions, and by purchase. Special wildlife funds were used to purchase game areas throughout northern Michigan that were intertwined with State Forests and resulted in inefficient management and confusion. On July 1, 1946, the Conservation Commission rededicated all northern lands as State Forests. In 1950, there were 3,685,000 acres of ownership in 22 State Forests. Timber receipts totaled \$149,000. It should be noted that the salvage of dead and down timber was authorized from the earliest days of the state forests. However, it wasn't until 1935 that legislation was passed expanding this authority to standing live timber. How interesting to note the value increase of harvested materials from under \$150,000 annually in 1950 to over \$25,000,000 in 2000!

It's time to leave the story until another time. But it is clear that the professional and loving care provided by a succession of foresters during the twentieth century have made the Michigan State Forest system one of the primary providers of outdoor recreation, habitat protection, and sustained timber products in the State of Michigan.

Michigan's forest dominated the landscape for centuries. In the 1800s, settlement, farming, logging, and forest fires changed the landscape dramatically. Farming mostly failed on the poor sandy soils of northern Michigan and logging removed forest cover. Whatever the reason, the landscape was left with dead wood or slash and vulnerable to intense forest fires. In 1871, fires burned approximately 2.5 million acres. Over 1 million acres burned in the Thumb in 1881. Fires destroyed trees, habitat, killed wildlife, and accelerated erosion and river/stream degradation.

In 1887, the State of Michigan established a Forestry Commission to preserve, protect, and restore Michigan's forests. The Commission was later dissolved. In 1889, the Forestry Commission was re-established. The Forestry Commission started nurseries for seedlings and stressed that fire protection was imperative to good forest management. In 1902, Michigan Agricultural College (now Michigan State University) established a Forestry curriculum for education, training, and research. The University of Michigan (1902) and Michigan Technological University (1936) established programs as well.

In 1903, the Forestry Commission established the first state forest in Crawford and Roscommon counties. Over the next 100 years the state forest system grew from 34,000 acres to nearly 4 million acres. It's vegetation changed dramatically as well, transforming from cutover and burned-over abandoned land to a vibrant, healthy, growing forest.

Today, Michigan's landscape is again dominated by forests, covering a little over half the State. These 19.3 million acres of forest land support a diversity of ecosystems, trees, animals, birds, fish, provide outdoor recreation, protect air and water quality, support local communities and forest industry, and enhance the quality of life in Michigan.

The National Forests in Michigan - A Short History

By Mike Moore

Like most forestry school students in the fifties, particularly at Michigan State University, I was strongly encouraged to seek summer employment with the United States Forest Service. Although the pay was little, and the cost of living away from home ate up most of the wages, it was a great experience. Most of us tried to get to the great Western forests we had heard so much about: The Bitterroot, the Olympic, the Flathead, the Stanislaus, The Klamath. I was lucky enough to spend the summer of my 18th year in Oregon, on the North Umpqua National Forest out of the Big Camas Ranger District, doing Forest Inventory; and the next year on the Ottawa National Forest, out of Ontonagon, Iron River, and Watersmeet, marking northern hardwoods for selective harvest. What a marked contrast between the two Regions of the county! But the National Forests of both Regions were, and continue to be of major importance to the citizens of this great nation.



Most national forests in the western United States were created from land already owned by the Federal Government. On the other hand, most of the land in the eastern national forests had to be purchased from private landowners. Author William E. Shands has noted "the image many among the public hold of the national forests are those of the national forests of the West---ancient forests; remote back country and immense open spaces that bear little evidence of human impact; wilderness areas of hundreds of thousands of acres. In the East, the reality is much different."

Indeed, the reality is much different. When the federal government began acquiring lands that are the now the National Forests of Michigan, they were far from being considered "forests". Almost all of the lands acquired were cutover forests or abandoned, exhausted farmlands. As Shands notes, "forest rehabilitation has been and continues to be a theme of management of the national forests of the East". Almost five generations of foresters have professionally and lovingly cared for these generally abandoned, worthless and abused lands that today are the magnificent National Forests in Michigan.

Congress passed the Forest Reserve Act of 1891 and over the next 15 years almost 100 million acres in the West were placed in the forest reserves. On June 4, 1897, President William McKinley signed the Sundry Act. One of the amendments was the so-called "Pettigrew Amendment" (later referred to as the "Organic Act"). This "Organic Act" allowed for the proper care, protection and management of the new forest reserves and provided an organization to manage them. It is believed that the first employee was Gifford Pinchot, who was hired in the summer of 1897, as a special forestry agent to

make further investigations of the forest reserves and recommend ways to manage them. Gifford Pinchot, of course, went on to becoming the founding President of our professional society in 1900.

In 1905 the American Forestry Association endorsed the proposal to establish eastern national forests by Federal purchase, which was defeated in Congress. Yet the first action in Michigan came in 1908 when President Theodore Roosevelt established the forest reserves from existing federal public domain lands. On February 10, 1909, certain lands in Michigan were proclaimed the Marquette National Forest. On February 11, 1909, certain other lands in Michigan were proclaimed the Michigan National Forest. (Later, in 1915, this Marquette Forest was proclaimed part of the Michigan National Forest, and then in 1928 renamed again the Marquette National Forest!). No legislative authority for the federal government to purchase land for the National Forests actually existed until the passage of the Weeks Law in 1911. The second wave of purchases in the late twenties and early thirties resulted in the establishment of the Huron National Forest on July 30, 1928, the Hiawatha National Forest was proclaimed on January 16, 1931 and the Ottawa National Forest was officially established on January 27, 1931. The Manistee National Forest was created in 1938 although the first Purchase Unit was established on August 30, 1933. Later, the Huron and Manistee National Forests were combined, encompassing all federal forestlands in the Lower Peninsula. This occurred in 1945.

When the great depression struck in the early thirties, thousands of young men were enrolled in the Civilian Conservation Corps, one of President Franklin D. Roosevelt's recovery programs. Michigan was among the first of the states to receive its full quota of CCC camps. At the end of 1935 there were over 100 camps operating in the state, with many of the camps under the direction of the U.S. Forest Service. Eventually there were 46 National Forest Camps at such locations as Glennie, Raco, Strongs, Paint Lake, Harrietta, Irons, Hoxeyville and many more. The CCCs greatly accelerated restoration of much of the federal land. Road, trail and bridge construction were important activities. Tree planting of large open areas, campground construction and forest fire protection were part of the CCCs. During the period of April 5, 1933 until June 30, 1942 the CCCs in Michigan planted more trees than any other State, almost 485 million, many of these on National Forest lands. The Forest Service established five nurseries in the 1930's to supply seedlings for state and national forests. They were located at Wellston, Manistique, Watersmeet, Raco and East Tawas. Examples of other work include construction of the Caberfae Ski area, fish habitat structures on numerous rivers, the first two campgrounds on the Ottawa (Bob Lake and Marion Lake) and the Olga Lake Waterfowl area, dammed by the CCC.

A steady flow of foresters have passed through the National Forests of Michigan with assignments as summer workers, temporary help, timber management officers, recreation specialists, District Rangers and Forest Supervisors. Many have gone on to greater positions in State and Federal agencies, in forest industry and in academia. Present Chief Mike Dombeck once worked as a summer fisheries worker on the

Hiawatha. They have been guided by the mission of the agency as determined by the laws passed by congress.

Today the approximate acreages of these great expanses of managed lands is as follows:

Ottawa National Forest 988,000 acres
Hiawatha National Forest 880,000 acres
Huron-Manistee National Forest 970,000 acres

The Ottawa National Forest has six separate ranger district offices located at Bergland, Bessemer, Iron River, Kenton, Ontonagon and Watersmeet with the Forest Supervisor's office located in Ironwood. The Hiawatha has five ranger district offices located at Rapid River, Munising, St. Ignace, Manistique and Sault Ste. Marie with the Forest Supervisor's office located at Escanaba. And the Huron-Manistee's Supervisor's office is located at Cadillac with ranger district offices at Oscoda (Huron Shores), Manistee (Cadillac and Manistee Districts) and Baldwin (Baldwin and White Cloud Districts) and Mio.

The Federal forest lands in Michigan greatly complement the existing State Forests, giving Michigan more than 6.5 million acres of public forest ownership. Public requests for designation of wilderness areas, demands for management that promotes biological diversity, high recreation use especially in the areas of hunting and trail use, and the call for use of the forest to benefit local economies continues.

After those happy days I spent in the Cascades and the Western Upper Peninsula as a bright eyed forestry student, the Congress began to take action relative to all of the National Forests. A flurry of federal legislation was enacted including the Multiple-Use Sustained-Yield Act of 1960 (which was intended to supplement not replace the Organic Act of 1897), the Wilderness Act of 1964, Wild and Scenic Rivers Act of 1968, National Environmental Policy Act of 1969, Endangered Species Act of 1973, the Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974, and the National Forest Management Act of 1976 (which amended RPA and repealed major portions of the Organic Act of 1897). Things were changing. But the proof is in the pudding. Any citizen who spends time in the National Forests of Michigan has a right to feel pride in their management. Those generations of foresters have done their work well. Recreational facilities of all types including trails, access to water, habitat improvement activities, timber resources matched to the land that thrives and grows, watershed protection....truly a testimony to the vision of the early officials who argued and cajoled the powers that be to establish the Eastern National Forests, one of the nation's crowning glories.

A Short History of Early Forestry Education in Michigan

By Michael D. Moore

We have a great history of Forestry Education in Michigan! For many years we were the only state to offer undergraduate degrees at three separate institutions! Graduates of our three schools (Michigan Technological University, Michigan State University, and the University of Michigan) have held an extraordinary variety of positions in government, industry and academia over the last century. I will not be addressing the Forest Technician aspects to Forestry Education in Michigan in this article due to a lack of space....and knowledge. If there is a member who could document Forest Technician education history in Michigan I would be very happy to receive it, and perhaps have it published in this space in the future. In Lou Verme's book on Forestry Schools in Upper Michigan (discussed later) he gives a very good accounting of the Wyman School of the Woods, a ranger school in Munising from 1909 to 1917. A variety of two year programs have existed over the years at a number of institutions and should be recorded for the sake of history. On to early Forestry Education in Michigan.

In 1898, America's first forestry school began in George Vanderbilt's "Pisgah Forest" in the mountains of western North Carolina. The German Biltmore Estate Forester, Dr. Carl A. Schenck, founded the school. He had succeeded Gifford Pinchot as manager of the vast Biltmore Forest properties in 1895 and he started the school to satisfy the need to educate his apprentices. A little known fact is that after a major dispute with estate owner George Vanderbilt in 1909 Dr. Schenck took the Biltmore Forest School on the road. There were six different locations around the world that the school traveled to each year, including Michigan, with a headquarters at Cadillac on the Cummer-Diggins Lumber Company holdings. This continued until 1913.

Also in 1898 Cornell University started a forestry program (a victim of politics it disappeared in 1903), and Yale University's School of Forestry began in 1900. The Cornell program was headed by Dr. Bernhard Eduard Fernow and one of its three original instructors was Dr. Filibert Roth.

Much earlier, in 1875 Dr. William J. Beal of the Michigan Agricultural College at East Lansing made experimental planting of 150 different species of trees, and on the basis of this study wrote the first experiment station bulletin on forestry in 1886 entitled "Lessons on Growing Forest Trees." The increasing emphasis on forestry at MAC led to a change in 1880 of Dr. Beal's title to Professor of Botany and Forestry. He is generally regarded as the father of Michigan forestry.

According to the great early North American forester Dr. Fernow, the first course recognized as true forestry was given by Dr. Volney Morgan Spalding at the University of Michigan in 1881. It was titled "The Science of Forestry" and was a required course in

political science! It continued for four years and is generally considered the course that set the tradition that something more had to be done about Forestry at Michigan.

The first formal course in forestry at MAC was listed in the college catalog in 1883. In 1888 Dr. Beal was appointed as a Director of the newly formed State Forestry Commission. He is generally considered one of the primary leaders in Michigan of this new profession of forestry.

The Departments of Forestry at the University of Michigan and Michigan Agricultural College (now MSU) were authorized in 1901. On March 5, 1903 the regents at Ann Arbor appointed Filibert Roth as Professor of Forestry who was then working in Washington D.C. for Gifford Pinchot as a manager of the National Forest Reserves. Interestingly Dr. Roth was also appointed in 1903 as Warden of the Michigan Forestry Commission. Bill Botti and I believe he can be considered the first State Forester for Michigan. In 1904 he wrote the "Michigan Forest Reserve Manual for the Information and Use of Forest Officers" a most interesting little book that includes forms for Timber Sales, Grazing Permits and Activity Reports....fifteen forms in all, numbered 1 to 15! Too bad Dr. Roth can't revisit the State Forestry operations today and view the plethora of forms available to the modern State Forest Manager! And the tremendous managed forests!

Professor E. E. Bogue was appointed professor of forestry at MAC in East Lansing in 1902. The year 1903 is generally accepted as the start of the professional curriculum in Forestry at both institutions. It is interesting to note that Harvard University, the University of Maine and the University of Minnesota also began their forestry education programs in 1903. Both MAC and UofM were national rather than local in character-they trained foresters for employment throughout the United States and their students came from all parts of the country.

Gifford Pinchot attended a Michigan Forestry Commission meeting in Grand Rapids in July, 1903 and, among other things, expressed concern over the existence of two forestry schools in Michigan - fearing they might waste valuable energy in competition with one another. His concerns were eased by the explanation that the two schools would divide responsibilities, with Michigan Agricultural college emphasizing farm forestry and the University of Michigan doing post-graduate work!

The Michigan College of Mining and Technology (now Michigan Technological University) organized a Department of Forestry in 1936 in keeping with the expanding curricula of the institution. Louis J. Verme has detailed the interesting beginnings to the Michigan Tech forestry school in his book, *Forestry Schools in Upper Michigan Then and Now....*, and its founder U. J. Noblet. After service as a WWI aerial gunner's mate U. J. received a degree in Forestry from Michigan Agricultural College. He then went to Houghton to coach hockey. In 1936 he left athletics to start the Department of Forestry. The forestry program at Michigan Tech has a rich history.

Over the years, many names of great importance to the profession are found on the faculty lists of the three schools....names like A. K. Chittenden, Stanley G. Fontana, Samuel T. Dana, Gene Hesterberg, T. D. Stevens, Paul A. Herbert, K. P. Davis, Stephen H. Spurr, Shirley W. Allen, Keith Arnold, Helmuth Steinhilb, Victor J. Rudolph, Larry Tombaugh, Eric Bourdo and Lee James, to mention a few. Roth, Davis, Spurr and Arnold all served as President of the SAF at one time in their careers and many faculty members such as James and Rudolph served on the ruling SAF Council.

There is a tremendous history in our three schools of forestry here in Michigan. Although the University of Michigan no longer grants an undergraduate degree in forestry the University is accredited by the Society of American Foresters for graduate study in forestry. How prophetic the explanation of why two schools were established in Michigan that was given to SAF's founder, Gifford Pinchot was in 1903! What a tremendous contribution to the science and practice of forestry in the United States (and the world) have the thousands of graduates of our three institutions made since 1903! Graduates of our schools have formed the heart and soul of our many government agencies, forest industries (large and small), forestry associations, consulting firms and our institutions of higher learning. Yes, many of the graduates have occupied prominent positions in our profession, and continue to do so.

For those interested in more information, may I suggest a copy of Louis J. Verme's book, "Forestry Schools in Upper Michigan Then and Now" ... available from the author for \$2.00. He can be reached at Louis J. Verme, E9566 Route 1, Munising, MI 49862
Phone 906-387-3235

SUGGESTED FURTHER READING

The Forests of Michigan
By Donald Dickmann and Larry Leefers (MSU forestry professors)
The University of Michigan Press
ISBN 0-472-06816-4

Michigan on Fire
By Betty Sodders
Thunder Bay Press
ISBN 1-882-37652-8

Michigan Historical Center [www.michiganhistory.org]

Michigan CCC Museum
11747 N. Higgins Lake Drive
Roscommon, MI 48653

Michigan DNR, A History of Resource Management [www.michigan.gov/dnr]



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