

Michigan Story . . .

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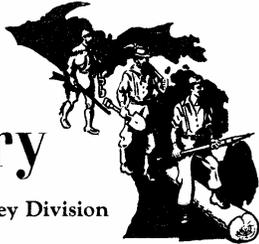
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WHEN THE FRENCH EXPLORER Cartier sailed down the St. Lawrence River in 1564 he was met by bands of friendly Indians who gave his sailors bits of bright red metal which they wore as amulets or kept wrapped in doeskin as household gods in their tepees and hogans. Thus, copper from the shore of Gitchee Gumee was the first of the natural resources of the land of sky blue waters to be known by Europeans and it was sought by them long before it was of interest to Americans on the Atlantic seaboard.

A British company financed by the Empress of Russia, the Duke of Gloucester, and lesser notables first sought the red metal, although unsuccessfully, at the falls of the Ontonagon. Benjamin Franklin remembered that copper was reported to come from Isle Royale and as the boundary map of the region was being studied during treaty negotiations following the American Revolution his pencil slid above the island and thus the island in Lake Superior, now a national park, became an American possession. But a half-century passed before Americans became really interested in the fabulous wealth of native copper deposited in the pores and cracks of the ancient Keweenaw lava flows.

Meanwhile the wealth in furs was being exploited. Beaver, marten, and mink were about exterminated and the great Astor Fur Company sent its trappers ever farther west, funneling the furs through the Straits of Mackinac. All that's left in Michigan now of that empire of furs is the old Astor House on Mackinac Island.

The Atlantic seaboard was becoming over-populated; forests, lands, fisheries were depleted; rich lands to the west lured settlers along the natural highways of ancient lake beaches into southern Michigan. They sought prairies and oak openings to establish agriculture. Some stopped at rapids in the many rivers, set up blacksmith shops and grist mills, and little villages became established. The first settlers cut, used what they needed, and burned the rest of magnificent stands of hardwoods and tilled the thin glacial soils. Crops were

good-abundant for the sparse population. Lakes and streams teemed with fish. The wild turkey and the passenger pigeon were plentiful. Deer came in slowly as the forest edges were pushed north and west. Pioneer days in southern Michigan were days of plenty and of plenty of hard work.

Salt was discovered in the Grand Rapids area, for 20 years the center of the industry in Michigan. Salt was sought in the Saginaw Valley. Open borings were made that permitted the brines to rise and spread horizontally in the sandstones that carried fresh water, and the bedrock fresh waters became brackish, then salty, as additional open borings were made in the search for coal and, later, petroleum. Now the cities of the valley must go to Lake Huron for potable water.

Population increased. Chicago grew almost overnight, the great forests were cut to supply lumber for homes in the Middle West. The tragedy was not that the timber was cut. Trees are a crop—they live, mature, and die. If man does not use them when they are ripe, Nature will destroy them as she has destroyed the virgin forests that had gone before. The tragedy was in the manner of cutting and especially in the fires that followed. Three forest fires in Michigan in 1873 were more destructive of wealth than the great Chicago fire of that year.

Steam from the lumber mills in the Saginaw Valley was used to make salt blocks but that industry followed lumbering into oblivion in the valley. Only ghostly reminders of once busy towns remain. Michigan's salt industry did not die but continues to flourish along the St. Clair and Detroit rivers using the enormous reserves of rock salt buried there. As lumbering moved to the shores of Lake Michigan the salt industry followed, notably to Manistee. When the trees were gone the salt remained and lakeside towns grew. The salt industry at Midland was developed by use of brines rather than rock salt, with recovery of bromine, calcium chloride, and magnesium. A great chemical industry has developed from the utilization of these wastes. This is true conservation.

Iron was discovered in the Northern Peninsula in 1844 and the Jackson mine near Negaunee was opened a year later—the mine from which the ore came that helped to establish the steel industry in the United States; steel for the Monitor and Merrimac, Civil War ironclads that were the forerunners of great battleships; steel rails that opened the Great West; steel for the first harvesters used in the wheatlands of the mid-continent. The Jackson mine—now a water-filled pit—opened the iron formations of northern Michigan which supplied the sinews of American industry until the easy-to-obtain ore was exhausted. Open pits gave way to costly underground mining and enough iron ore was taken out of the workings west of Marquette to fill the Panama Canal. Then the Mesabi Range in Minnesota was opened and iron mining was believed to be “finished” in Michigan. But it wasn't.

Metallurgists and chemists found ways to use the lean low-grade ores that were left. Geologists learned that we have reserves for 100 years. A fair tax policy encouraged iron companies to search for ore and nearly four million tons were added to the reserves in one year.

In 1844 the Cliff copper mine was opened. Lake copper—Michigan native copper—was the foundation of the American electrical industry for many years before Montana copper was used. So rich was the rock that the small masses of copper in the stamp sands were dumped into Torch Lake and Portage River in Houghton County. The mines, going ever deeper in the inclined lava flows, became too deep to operate at a profit—the Quincy, deepest of all, was 6,350 feet deep vertically and nearly 11,000 feet on the incline. Copper was brought up at a cost of several cents a pound over the selling price and a tragedy of the Copper Country came in the closing of the Quincy, the deep Red Jacket shaft of the Tamarack, and many others.

But a chemist found a way to recover the copper in the stamp sands and tailings. A way may be found to recover copper from the old mine dumps now used to supply material for the good highways that annually entice thousands of tourists to the tip of the Keweenaw Peninsula. New methods of exploration are going into use. The Copper Country is not dead despite its ghost mining towns. Only a quarter of the copper bearing rocks have been explored.

As population increased, Michigan's wealth was being used to create the high standard of American living, the forests were cut down to build and furnish the homes of the Middle West, the swamp lands were drained—not always wisely, the agricultural soils were depleted and large areas reverted to the state for non-payment of taxes.

Wastelands? No! Idle lands! There are no wastelands. All are good for something at the surface and underneath the surface there is mineral wealth: wealth primarily in the water supply, tapped for the ever-increasing uses of an expanding population and many new uses in industry and agriculture; petroleum, latest of the state's resources to be exploited, although natural gas has been used in Michigan since Indians first lit their sacrificial fires, and petroleum has been taken from the earth since 1886.

Uncontrolled exploitation of petroleum continued for two years after the tapping of the Saginaw and Muskegon pools in the period 1925-27. Adequate conservation laws and the conservation practices of oil companies have prevented further over-exploitation.

Much of Michigan's non-renewable mineral resources has been depleted, former wastes of copper, iron, and limestone are being salvaged, and we have laws to protect the state's petroleum reserves. We hope that ultimately Michigan will have laws to adequately protect its underground fresh water supplies and brine resources. New uses for the sands and gravels of the

glacial drift are being found and Michigan's people need to learn how to utilize them with the least possible waste.

And what of the surface of the "idle lands?" Some are being reforested. All of them? No, because it has been found that open areas are necessary for game.

There is another use for the state's idle lands. Michigan's renewable resources have been used to increase the culture of North America, its non-renewable mineral resources to help create the nation's high standard of living. Use of both has created leisure. Is it not reasonable, then, that other resources should be used to recreatively occupy that leisure? Is it not just that areas of the state not suitable for agriculture should be set aside as parks and recreation areas where man may relax? This has been done in every part of the state.

How are the people of Michigan to become informed about the state's resources, their wise use and conservation, their place in history? Led by the women of the state, fostered by the teachers' colleges and the state Departments of Conservation and Public Instruction, a program of conservation education is spreading throughout Michigan, a program which shows the integration and correlation of all of the state's natural resources, renewable and non-renewable, a program which demonstrates that conservation can be taught at all grade levels, a program which uses every out-of-doors activity as a field work tool for the larger work of conserving all of the state's resources from a drop of water to man.

More authority is needed for some of the work in conservation that is undertaken, and Michigan's fine laws for the conservation of petroleum resources—the acceptance of those laws by the industry and their adequacy and efficiency in operation—provide the models for conservation laws governing use of other resources.

Times and men have changed since Cartier first saw the red metal—copper.