
THE ONTONAGON COPPER BOWLDER IN THE
U. S. NATIONAL MUSEUM.

BY

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In a corner of the National Museum a boulder of native copper, weighing perhaps three tons, rests upon a plain wooden base. Transferred to the Museum from the Patent Office, in 1858, the copper fragment was accompanied by no records, and this paper has been written with the view of tracing the intricate but interesting story of the once celebrated Ontonagon boulder.

Worshipped as a manitou by the superstitious Indians during uncounted years, the siren of mining adventurers while yet the flag of England floated over the Lake Country, the objective point of hazardous expeditions by explorer and scientist, the Ontonagon boulder has never been so left to itself as it has been during the half century that has elapsed since it was brought to the national capital, where the expectation was that all eyes might gaze upon it as the representative of national wealth and enterprise.

About the middle of the seventeenth century the Jesuit missionaries and the French explorers, penetrating the wildernesses about Lake Superior, found among the most treasured possessions of the Indians pieces of copper weighing from 10 to 20 pounds. Often these fragments of copper were regarded as household gods, and from an indefinite past had been transmitted from generation to generation. Tradition also told of larger masses of copper situated at several points along the shores of the great lake, whose shifting sands often covered up the bowlders for years at a time, thus causing the superstitious savages to declare that their offended deities had disappeared for a season.¹

In 1667 a piece of copper weighing a hundred pounds was brought to Father Dablon. "The savages," he reports,² "do not all agree as to the place whence this copper was derived. Some say it came from where the [Ontonagon] River begins; others say close to the lake; and others from the forks and along the eastern bank." Whether the

¹Journal du Voyage du Père Claude Allouez, Relation de la Nouvelle France, en l'Année 1667. Sagard, p. 589. Voyages of Pierre Êsprit Radisson, Third Voyage.

²Relation of 1670.

Dablon fragment was a float piece of copper, or whether it was a portion broken from the great rock, it is impossible to say. The reference of the Jesuit father, however, makes it evident that at the time when he wrote, the Indians were familiar with the copper region along the Ontonagon, on the west bank of the west fork of which river the great boulder lay when discovered by white men.

In 1669 the French Government sent Louis Joliet to Lake Superior to search for the deposits of copper so often referred to in the relations of the missionaries, but he got no farther than Sault Ste. Marie, and three years later he turned aside from such material pursuits to accomplish, in company with Father Marquette, the discovery of the Mississippi River. So far as authentic records go, the first white man to visit the Ontonagon boulder was Alexander Henry, an English adventurer, and he saw it to his cost. Shortly after England acquired Canada from France, Henry established himself as a trader at Mackinac, and his narrow escape from death at the hands of the savages in the massacre at that post in 1763 forms one of the most thrilling chapters of Parkman's "Conspiracy of Pontiac," and is also the basis of Mrs. Catherwood's more recent story, "The White Islander."

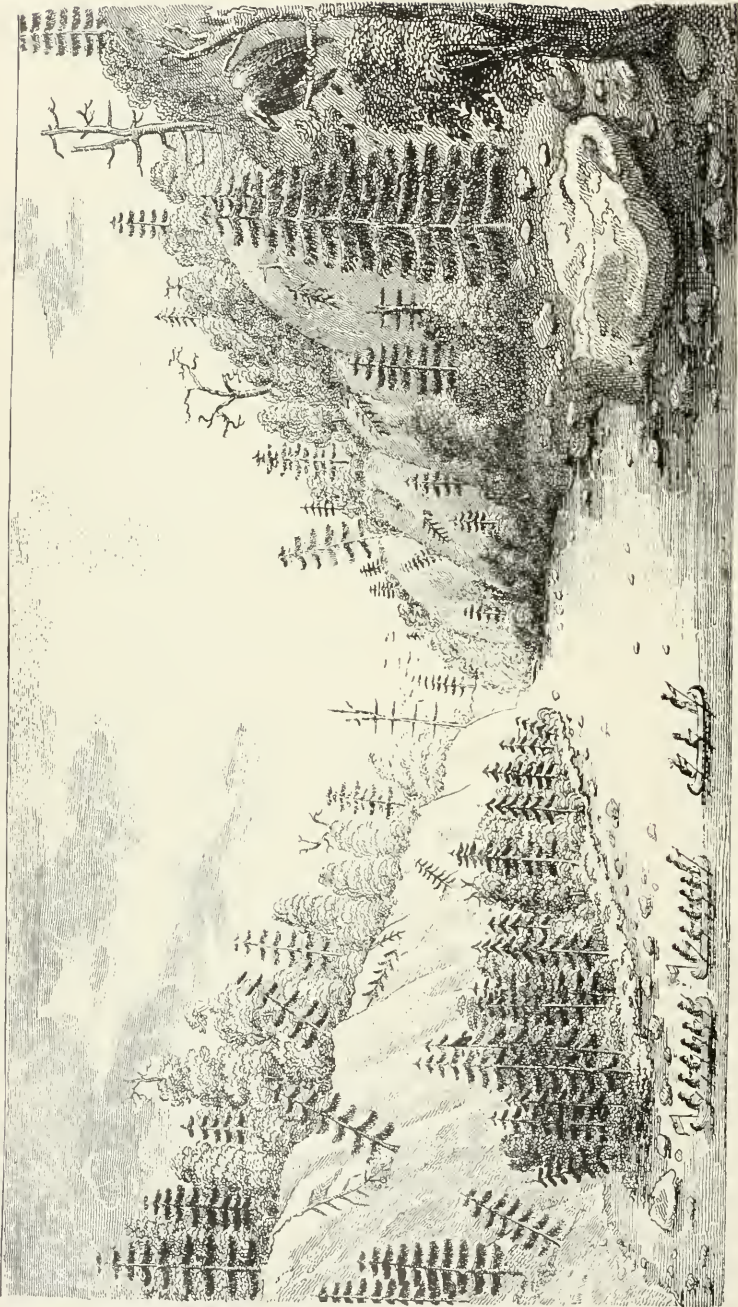
In 1771, lured doubtless by the mass of copper at the forks of the Ontonagon, Henry and his associates undertook to pierce the bluffs of clay and red sandstone which bordered that stream,¹ in the hope of finding the vein whence the boulder came. Only complete ignorance of the geology of the Lake Superior region can explain what Doctor Houghton calls "these Quixotic trials;"² and complete failure was the natural result.

In 1819, General Lewis Cass made the first explorations of the Lake Superior region that were undertaken by this Government. Turning from their path, his party ascended the Ontonagon River for 30 miles to visit the mass of copper whose existence, says Cass, had long been known. "Common report," he writes to John C. Calhoun, Secretary of War, "has greatly magnified the quantity, though enough remains, even after a rigid examination, to render it a mineralogical curiosity. Instead of being a mass of pure copper, it is rather copper embedded in a hard rock, and the weight probably does not exceed 5 tons, of which the rock is much the larger part. It was impossible to procure any specimens, for such was its hardness that our chisels broke like glass. I intend to send some Indians in the spring to procure the necessary specimens. As I understand the nature of the substance, we can now furnish them with such tools as will effect the object. I shall, on their return, send you such specimens as you may wish to retain for the Government or to distribute as cabinet specimens to the various literary institutions of the country."³

¹Henry, Alexander. *Travels and Adventures in Canada*. New York, 1809, p. 231.

²Bradish, Alvah. *Memoir of Douglas Houghton*. Detroit, 1889, p. 204.

³Smith, W. L. G. *Life and Times of Lewis Cass*. New York, 1856, p. 133. Cass never saw the rock, as he himself says in Senate Report 260, 28th Congress, 1st session,



THE ONTONAGON BOWLDER IN 1819.

Doctor Henry R. Schoolcraft, who was a member of the Cass expedition, says that the boulder was found on the edge of the river, directly opposite an island and at the foot of a lofty clay bluff, the face of which appears at a former time to have slipped into the river, carrying with it detached blocks and rounded masses of granite, hornblende, and other rock, and with them the mass of copper in question. "The shape of the rock," he says, "is very irregular. Its greatest length is 3 feet 8 inches; its greatest breadth, 3 feet 4 inches, and it may altogether contain 11 cubic feet. In size it considerably exceeds the great mass of native iron found some years ago upon the banks of the Red River, in Louisiana, and now deposited among the collections of the New York Historical Society, but, on account of the admixture of rocky matter, is inferior in weight. Henry, who visited it in 1766, estimates its weight at 5 tons; but, after examining it with scrupulous attention, I do not think the weight of metallic copper in the rock exceeds 2,200 pounds. The quantity may, however, have been much diminished since its first discovery, and the marks of chisels and axes upon it, with the broken tools lying around, prove that portions have been cut off and carried away."¹

Schoolcraft calls attention to the fact that the connection of the boulder with substances foreign to the immediate section of the country where it lies, "indicates a removal from its original bed, while the intimate connection of the metal and matrix, and the complete envelopment of individual masses of copper by the rock, point to a common and contemporaneous origin, whether that be referable to the agency of caloric or water."

Schoolcraft gives a view of the copper rock (see Plate 2) taken from a point below the mass of copper, looking up the river; and from the picture one readily understands with what difficulty the mass was removed. The story of that removal is now to be told.

The party sent by Cass were not so fortunate as he anticipated they would be. They cut about thirty cords of wood, which they placed about the boulder, and then set fire to the pile. When the copper was well heated, they dashed water upon it, but the only result was to detach pieces of quartz rock adhering to the native copper. The party, having become disheartened, left the country, having moved the rock 4 or 5 feet from the bank of the river; nor did the Barbeau party, who went from Sault Ste. Marie two years later, have any better success. It so happened, however, that Mr. Joseph Spencer, a member of the Cass expedition, told the story of the copper rock to Mr. Julius Eldred, a hardware merchant of Detroit; and for sixteen years this enterprising man schemed and planned how he might succeed where others had failed.²

¹ Narrative Journal of Travels through the Northwestern regions of the United States, etc. Albany, 1821, pp. 175-178.

² John Jones, Jr., in the New York Weekly Herald, October 28, 1843.

Until the report made by the State geologist of Michigan, Doctor Douglass Houghton, in 1841, there had been no authentic or trustworthy statements in regard to the copper-bearing rocks of Lake Superior;¹ but within four years from the date of that report the mineral lands from the tip of Keweenaw Point to the Ontonagon River were overrun with prospectors, the great majority of whom left dollars where they found pennies. It is in Doctor Houghton's report that the best scientific account of the copper rock is to be found. "I have thus far," he says, "omitted to allude particularly to the large mass of native copper which has been so long known to exist in the bed of the Ontonagon River, lest, perhaps, this isolated mass might be confounded with the veins of the mineral district. That this mass has once occupied a place in some one of these veins is quite certain, but it is now perfectly separated from its original condition and appears simply as a loose transported boulder. * * * The copper boulder is associated with rocky matter, which in all respects resembles that associated with that metal in some portions of the mines before described, the rocky matter being bound together with innumerable strings of metal; but a very considerable portion of the whole is copper in a state of purity. While this mass of native copper can not fail to excite much interest, from its great size and purity, it must be borne in mind that it is a perfectly isolated mass, having no connection with any other; nor does the character of the country lead to the inference that veins of the metal occur in the immediate vicinity, though the mineral district crosses the country at a distance of but a few miles."

Leaving for the moment the question as to the origin of the copper rock, let us follow its history. Prior to 1843 not a pound of copper had been shipped commercially from Lake Superior. The billion and a half pounds which have been taken from that region have been mined since that year, and more than half that product has been taken from a mine discovered since the war of the rebellion ended. The Ontonagon boulder was not regarded primarily in a commercial light; for its market value as ingot copper could not have exceeded \$600.² Mr. Eldred's object in transporting it to the lower lakes was to exhibit it for money in the various cities of the East. It was a curiosity. As Senator Woodbridge said, it was "a splendid specimen of the mineral wealth of the 'Far West.'"

In 1841 Mr. Eldred arranged with Samuel Ashman, of Sault Ste. Marie, to act as his interpreter in the purchase of the copper rock from the Chippewa Indians, on whose lands it was situated. Obtaining a trading license from Mr. Ord, the Government agent, the two men set out for the mouth of the Ontonagon, where they met the chiefs and concluded the purchase for \$150, of which sum \$45 was paid in cash at the

¹Whittlesey, Charles, in Smithsonian Contributions, Vol. XIII.

²Senate Report on Wholesale Prices, Wages, and Transportation, 1893, I, p. 70, gives the prices of copper for sixty years.

time, and the remainder was paid in goods two years later. The party then proceeded about 26 miles up the river, climbed the high hill which intervened between the main stream and that point on the fork where the rock was situated, and raised it on skids. More than this they could not do; nor did they have greater success the following summer.

In 1843 Mr. Eldred started from Detroit with wheels and castings for a portable railway and car; and to protect his property rights, he secured from General Walter Cunningham, the United States mineral agent, a permit to occupy for mining purposes the section of land on which the boulder stood. Arriving at the rock, Mr. Eldred was surprised and chagrined to find it in possession of a party of Wisconsin miners under the direction of Colonel Hammond, who had located the land under a permit made directly by the Secretary of War to Turner and Snyder, and by their agent transferred to Hammond. The only thing to do was to buy the rock again, and this Mr. Eldred did, paying for it \$1,365.

It took a week for the party of 21 persons to get the rock up the 50-foot hill near the river; then they cut timbers and made a stout wooden railway track, placed the rock on the car, and moved it with capstan and chains as houses are moved. For four miles and a half, over hills 600 feet high, through valleys and deep ravines; through thick forests where the path had to be cut; through tangled underbrush, the home of pestiferous mosquitoes, this railway was laid and the copper boulder was transported; and when at last the rock was lowered to the main stream, nature smiled on the labors of the workmen by sending a freshet to carry their heavily laden boat over the lower rapids and down to the lake.¹

While arranging transportation to Sault Ste. Marie, Mr. Eldred was confronted by an order from the Secretary of War to General Cunningham directing him to seize the copper rock for transportation to Washington. "The persons claiming the rock have no right to it," says Secretary Porter, "but justice and equity would require that they be amply compensated for the trouble and expense of its removal from its position on the Ontonagon to the lake; and for this purpose General C. will examine into their accounts and allow them the costs, compensating them fully and fairly therefor, the sum, however, not to exceed \$700. * * * If they set up a claim for the ownership of the article itself, that is not admitted or recognized, and their redress, if they have any, will be by an application to Congress."²

¹Jones's letter in New York Herald. I have carefully examined the statements made by Mr. Alfred Meads in the Ontonagon Miner of June 22, 1895, assigning to James Kirk Paul, the founder of the town of Ontonagon, the credit of bringing down the rock. Undoubtedly Captain Paul was in the party, but the proof is conclusive that all work was done under the direction of Mr. Eldred.

²War Department MSS. Letters Cunningham to Porter, August 28, 1843; Maynadier to Porter, September 27, 1843, and Porter's indorsement.

The sum mentioned by the Secretary being manifestly too small to compensate Mr. Eldred "fully and fairly," General Cunningham allowed the latter to transport the rock to Detroit, and promised that if the curiosity was ordered to Washington, Mr. Eldred should be placed in charge of it. On October 11, 1843, the bowlder was landed in Detroit¹ and placed on exhibition for a fee of 25 cents; and among those who embraced the opportunity to visit it was Henry R. Schoolcraft, who renewed an acquaintance with the copper monarch, formed twenty-three years before.² After less than a month of uninterrupted possession, United States District Attorney George C. Bates informed Mr. Eldred that the revenue cutter *Erie* was waiting at Detroit to receive the rock for transportation to the capital; and on November 9 the bowlder started on its long journey,³ by way of Buffalo, the Erie Canal, and New York City, to Georgetown, District of Columbia. Mr. Eldred accompanied it as far as New York, and met it at Georgetown with a dray, by which it was hauled to the Quartermaster's Bureau of the War Department and deposited in the yard, where it remained until sometime subsequent to 1855.⁴

Mr. Eldred now appealed to Congress for redress; and it so happened that in the Senate William Woodbridge, of Michigan, was chairman of the Committee on Public Lands. An exhaustive report on the subject was made at the first session of the Twenty-eighth Congress, and three years later, by an act approved January 26, 1847, the Secretary of War was authorized "to allow and settle upon just and equitable

¹ Farmer's History of Detroit and Michigan, calendar of dates.

² Schoolcraft, Henry R. *The American Indians*. Rochester, 1851.

³ Treasury Department MSS. Letters from Secretary Spencer to Captain Knapp, September 29, 1843; Knapp to Spencer, November 11, 1843; Captain Heintzelman's receipt, November 11, 1843.

⁴ Roberts's Sketches of Detroit, 1855.

Doctor Thomas Wilson, of the National Museum, a second cousin of Cyrus Mendenhall, who was one of the early proprietors and workers of copper mines in Lake Superior (probably from 1840 to 1855 or 1856), contributes the following information, which is of interest in this connection: "My uncle, Thomas Mercer, when a young man, went from Columbiana County, Ohio, to Lake Superior as an assistant to his cousin. In about 1848 he came down from Lake Superior, by way of the canal, from Cleveland to Beaver with one of these immense masses of copper. He dined en route at my father's house at New Brighton, and in his company after dinner I rode with him on the boat as far as Rochester. I remember the appearance of the nugget of copper very well. It was as large or larger than the one in the National Museum, and when I saw the latter, I thought it was the same which I had seen on the boat. I learned from my father that the mass which we saw on the boat was taken to Pittsburg, under the belief that it would prove of considerable profit to its owners. It turned out to be a loss, however, owing to their inability to melt it or to cut it, or in any way divide or separate it into small enough pieces to handle. They built a fire over it as it stood in the yard. How they then treated it I do not know; nor do I know that, with all this labor, it was finally reduced. It brought no profit to the original owners." Dr. Wilson thinks that there must have been two or more of these large copper nuggets which were brought down the lakes from Lake Superior.



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terms the accounts of Julius Eldred and sons for their time¹ and expenses in purchasing and removing the mass of native copper commonly called the copper rock." The sum thus paid was \$5,664.98.

From the yard of the old War Department to the National Museum is not a long journey for so traveled a rock, and we need spend no time on it. There is, however, another and a really important question as to the origin of the bowlder. Accepting the statements of Schoolcraft and Doctor Houghton that the copper rock as found was an isolated mass, but that it undoubtedly came from one of the veins in the narrow copper belt, let us examine the results of explorations made since their day.

During the winter of 1847-48 Mr. Samuel O. Knapp, the agent of the Minnesota mine, observed on the present location of that mine a curious depression in the soil, caused, as he conjectured, by the disintegration of a vein. Following up these indications, he came upon a cavern, the home of several porcupines. On clearing out the rubbish, he found many stone hammers; and at a depth of 18 feet he came upon a mass of native copper 10 feet long, 3 feet wide, and nearly 2 feet thick.² Its weight was more than 6 tons. This mass was found resting upon billets of oak supported by sleepers of the same wood. There were three courses of billets and two courses of sleepers. The wood had lost all its consistency, so that a knife blade penetrated it as easily as if it had been peat; but the earth packed about the copper gave that a firm support. By means of the cobwork the miners had raised the mass about 5 feet, or something less than one-quarter of the way to the mouth of the pit. The marks of fire used to detach the copper from the rock showed that the early miners were acquainted with a process used with effect by their successors. This fragment had been pounded until every projection was broken off and then had been left, when and for what reason is still unknown.³ From similar pits on the same location came ten cart loads of ancient hammers, one of which weighed 39½ pounds and was fitted with two grooves for a double handle. There were also found a copper gad, a copper chisel with a socket in which was the remains of a copper handle, and fragments of wooden bailing bowls. At the Mesnard mine, in 1862, was found an 18-ton bowlder that the "ancient miners" had moved 48 feet from its original bed.

¹In Senate Report 260, Twenty-eighth Congress, first session, Mr. Eldred relates his trials and final success. Several of the official communications quoted in this article are printed in that report. The existence of the report, however, was developed from the communications which were kindly furnished me by Colonel F. C. Ainsworth, chief of the Record and Pension Division of the War Department; Captain C. T. Shoemaker, chief of the Revenue-Cutter Service, and Honorable T. Strobo Farrow, Auditor of the Treasury for the War Department.

²Foster & Whitney's Report. House Ex. Doc. 69, Thirty-first Congress, first session, p. 159.

³A cut and a full description of this find is given by Colonel Whittlesey in his article on Ancient Copper Mining in the Lake Superior Region, Smithsonian Contributions to Knowledge, XIII.

The fact that growing in the débris of one of these ancient pits was a hemlock having 395 annular rings places the date of the excavations before the days of Columbus. That they were made by a race distinct from the present Indians is inferred from the fact that the Indians knew nothing of copper in place; and they had no traditions of the ancient copper mines which cover the entire copper belt, and which have been to modern miners the best indications of the presence of that metal. Within 2 miles of one of these "ancient diggings," as they are called, the copper rock was found.

The question here arises, Was the Ontonagon boulder detached by glacial action and carried southwesterly along the drift to the point whence eventually it dropped into the bed of the river; or is it the product of the mining operations of that busy people whose well-built boats with each recurring summer in past ages dotted the clear waters of Lake Superior, and whose keen search led them to the outcrops of copper as well among the inhospitable thickets of the mainland as on the wave-lashed islands of the greatest of lakes?

Such is the question propounded by Mr. Edwin J. Hulbert, who spent the best years of his life in a study of the copper country; and whose recently published work on "The Calumet Conglomerate" marks him as the most scientific explorer who ever accomplished great results in the Lake Superior copper country. Doubtless the question is unanswerable; but whether nature or man tore the copper rock from its original home, it stands to-day as the first considerable shipment of copper from the Lake Superior region and the largest mass ever taken away from a mine. It is unique also in this: The mines of the Ontonagon region belong to the past. The great Minnesota mine from which a 500-ton boulder, valued at over \$200,000, was taken, and whose stockholders received \$30 for every dollar they put in, has long ago been surpassed by the Calumet & Hecla, whose ore contains but an insignificant proportion of mass copper. There are no more masses of virgin copper to be found: and the Ontonagon boulder is not only the first, but it is also the last remaining representative of its kind.