

North America's First Metal Miners

by Dave Johnson

Have you ever wondered who the first metal miners in North America were? To get the answer we have to look back several thousand years.

Deposits of 99%+ pure copper are known on the North shore of Lake Superior, Isle Royale and the Keweenaw Peninsula of Michigan. Reports of these copper deposits were heard by the earliest French explorers of the Great Lakes Region, beginning in 1608 with Champlain. He received a foot long specimen of native copper from an Algonquin Indian chief and sent it to King Henry IV. There were no immediate attempts by early explorers to find the source of this copper. However, prior to 1800 there were some attempts to find the source of native copper that was spoken of by Indians of the region. These early attempts all ended in failure.



Left: 4" socketed copper spud for woodworking. Right: Copper crescents, rolled beads, and coiled beads.

By the mid to late 1840's, when the first modern copper mines were opened in the Keweenaw Peninsula, individuals searching for copper deposits began to find traces of earlier mining efforts. Throughout the Keweenaw Peninsula and Isle Royale pits and trenches dug into the rock were discovered, some as deep as 20 feet and others only a few feet deep. These pits showed evidence of copper having been removed from the surrounding rock, and in some cases copper was found partially worked out of the rock but still in place. In some cases large masses of copper were found in the pits that had been worked free but never removed. In association with these pits were found tons of grooved and ungrooved stone hammers, as well as some copper artifacts (knives, spear points, spuds, etc.).

An interesting point of fact is that these old workings were found on every copper lode discovered on the Keweenaw Peninsula and Isle Royale by modern miners.

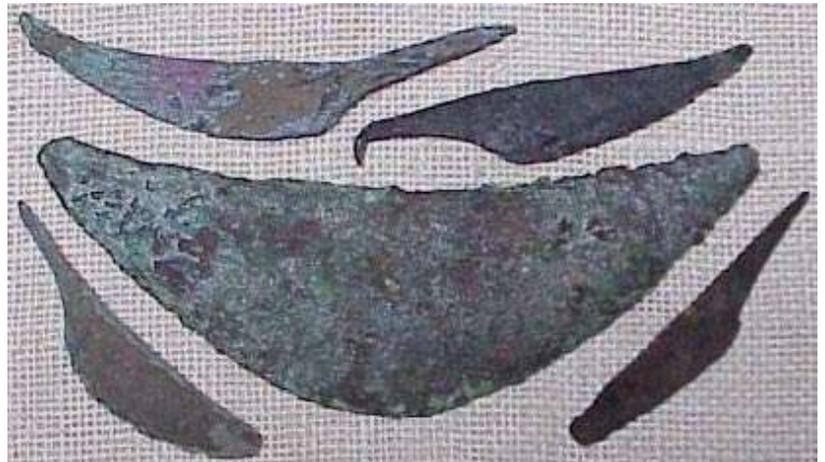
Many theories have been advanced as to who these early copper miners were, some both incredible and ludicrous. These theories run the gamut from Phoenicians to Berbers, Bronze Age Europeans to Vikings, but there is no archeological evidence to support these theories.



Our own Euro-centrist racial bigotry allows many to ignore the obvious, that this copper was first discovered, mined and fashioned into tools, weapons and ornaments by the indigenous Indians of the region. Before admitting that indigenous Indians could have mined native copper and fashioned items for everyday use, some 'scholars' would have us believe that the copper was mined and worked by a "virtually unknown race of people" or Euro-Mediterranean peoples. There is, in fact, unbroken continuity in indigenous peoples, based upon artifact and skeletal evidence, in the Upper Great Lakes Region.

Left: Crescent and tanged knives. Below: 8" crescent and 4 tanged knives.

Prehistoric Native Americans began to populate the area we today call Wisconsin at least 11,500 years ago. The end of the last ice age, the Pleistocene Epoch, saw the first human inhabitants arrive in the Western Great Lakes Region. The receding glaciers opened vast new territories for habitation. These post-ice age hunter-gatherer cultures have been named the Archaic Period or Tradition. In the Great Lakes Region the Archaic Tradition spanned from about 6500-1000 BC or 8500-3000 BP (Before Present).



One of the lasting effects of the last glacial period on the Great Lakes Region was the scouring of the rock that holds the copper deposits. This glacial scouring action exposed veins of native copper and broke off pieces of copper transporting them miles or even hundreds of miles to the south. This transported copper, found mostly in glacial gravel, is known as "float copper". It was deposited as the glaciers melted and receded northward. This float copper is found in sizes and weight from that of a pea to several tons. This float copper was readily available to the indigenous Indians during the Archaic Tradition. Experimentation would have demonstrated that this copper was malleable and could be fashioned into useful shapes. It is only a small step from finding the float copper to finding the exposed copper veins.

The first indigenous Indians who actually mined and utilized the copper have been labeled Old Copper Complex or Old Copper Culture by archeologists. There is disagreement among archeologists as to the time period to ascribe to the Old Copper Complex. Dates range from over 7000 years BP to 3000 BP. The greatest disagreement seems to be over the beginning age of the Old Copper Complex. Carbon-14 testing of organic materials found with Old Copper Complex artifacts has established a date of at least 6000 years BP. Copper was still being used through the Woodland Period and actually up to protohistoric times, long after the decline of the Old Copper Complex. The copper artifacts from the Old Copper Complex differ from those of later manufacture.



Copper celts (right), unusual crescent (center left), bracelet (topleft)

Since there is no physical evidence of the Lake Superior copper deposits having been worked by those other than indigenous Indians, what evidence exists to prove that the indigenous Indians were the ones who worked the copper deposits and manufactured the copper artifacts found today?



Conical points (top), fishhooks (center) and harpoons (bottom and middle left and right)

This evidence came in May of 1945 when two fishermen found some artifacts projecting from the bank of the Mississippi River at an old steamboat landing site known as Osceola Landing, in Grant County, Wisconsin. Following this initial discovery, numerous artifacts were removed from the site by local collectors and were subsequently identified as Old Copper Complex artifacts. Old Copper Complex artifacts consist of socketed spuds, crescents, fishhooks and harpoons, gaffhooks and pikes, conical spear points, awls, rat-tailed spear points, knives, socketed spear points, and other pieces of undetermined usage, none of which had previously been found in situ prior to those at the

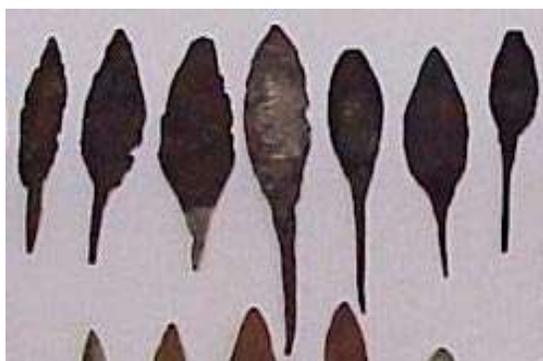
Osceola Site, all previous finds being surface finds or caches.

Of great importance was the discovery, by archeologists, of skeletal remains in association with copper and chipped stone artifacts at the Osceola Site. It is estimated that there were approximately 500 burials at this site. The major contribution of the Osceola Site was the demonstration of a cultural complex that included Old Copper Complex artifacts. The Osceola Site tied Old Copper Complex artifacts in with a distinctive chipped stone industry and a burial complex.

It was not until June of 1952 that another Older Copper Complex site was discovered near the Oconto River. Thirteen year old Donald Baldwin was playing in an abandoned gravel pit when he found human bones.. It was found that a great deal of the original burial site had been removed by commercial gravel operations in the 1920's, but 45 burials remained. Seven awls, 4 crescents, 3 clasps, 1 socketed spear point, 1 fish-tail spear point, 1 ovoid spear point, 1 fish hook, 1 coiled copper tube, 1 bracelet, and 1 spatulated artifact. Awls were found to be the most commonly occurring artifact, just as they had been at the Osceola Site.

In 1953 a late Copper Complex site (approximately 3000 BP) was discovered on the South shore of Lake Butte des Morts, on the farm of Matt Reigh. Like the Oconto Site, it had been uncovered and partially destroyed by gravel operations. Burials of 43 individuals were uncovered along with copper artifacts identified as Old Copper Complex.

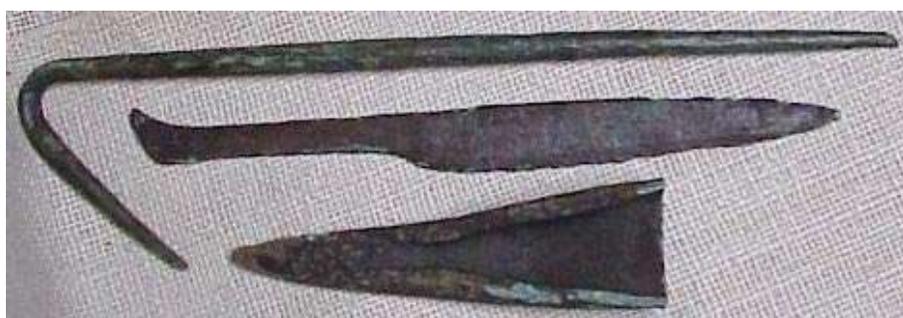
These three sites, with their skeletal remains, chipped-stone and Old Copper Complex artifacts support the unbroken continuity of indigenous peoples in the Upper Great Lakes.



(left) Rat-tailed spearpoints, center point is mostly silver, first point to left has silver tang.

Evidentiary finds at sites in Canada support the Wisconsin site findings. Old Copper Complex artifacts have been found at sites in Ontario, Manitoba, and Quebec, Canada. The Morrison Island-6 site, located on an island in the Ottawa River, was found to contain 18 burials and 276 copper artifacts, including a spud, projectile points, knives, and others. Also of interest was the discovery of worked and unworked copper scraps, indicating copper manufacture on the site. A C-14 date places this site at 4700 years BP, clearly an Old Copper Complex Site.

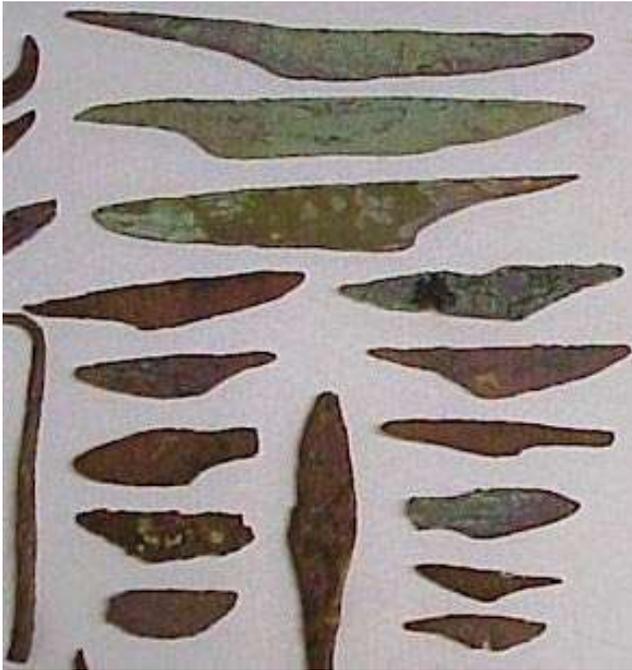
The Caribou Lake Site contained a cremation pit with skeletal fragments and tooth enamel remains along with copper artifacts. C-14 dating places this site at 3900 BP.



15" copper gaff hook, unusual knife and large spear point.

While Old Copper Complex artifacts have been found from Alberta in the west to Quebec in the east in Canada, and as far west as North Dakota, as far east as New York and as far south as Kentucky in the U.S., the center of the Old Copper Complex is generally agreed to be in Wisconsin. How did Old Copper Complex artifacts come to be scattered so far afield? The answer to this question is trade. The presence of specific types of stone and shell artifacts not indigenous to Wisconsin demonstrate the fact that widespread trading took place.

How did these Archaic Tradition Indians obtain and work the copper that identifies them as Old Copper Complex. As mentioned earlier, the source of the copper was the north shore of Lake Superior, Isle Royale and the Keweenaw Peninsula of Michigan, as well as glacial deposits left by the receding glaciers to the south of the actual copper deposits.



How were these people able to extract the copper from the very hard rock in which most of the copper is found? The answer is found in the use of fire, water and stone. When a copper vein was discovered, fires were built on the rock and kept burning until the rock was quite hot, water was then thrown on the heated rock and the rapid cooling fractured it. This process could be repeated several times before these ancient copper miners began using stone hammers to break the copper free of the rock. Stone hammers were also used to break off pieces of copper small enough to be worked.

(left) Variety of copper knives.

(below) Unusual copper tanged knife and copper rings.



The stone hammers were of two varieties - grooved and ungrooved. The grooved hammers could have handles attached while ungrooved hammers were merely held in one or both hands. Hammerstones have been found weighing from 1 to more than 30 pounds. The vast majority of hammerstones found on Isle Royale are ungrooved, while the majority found on the mainland are grooved.

There have been fabulous claims made as to the time and manpower required to create the ancient copper pits and the amount of copper mined. Starting with Drier and Du Temple in 1961 and Mertz in 1967, through Sodders in 1990 figures of .5 to 1.5 billion pounds have been put forth. Sodders postulates 'it is believed that as many as 10,000 miners, labored some 1,000 plus years, in an estimated 10,000 Copper Range pits". Drier and Du Temple get to their figures with the following



Variety of copper spearpoints

suppositions from their 1961 work: Prehistoric Copper Mining in the Lake Superior Region, in which they state" If one assumes that an average pit is 20 feet in diameter and 30 feet deep, then it appears that something like 1000 to 1200 tons of ore were removed per pit. If the ore averaged 5 per cent, or 100 pounds per ton then approximately 100,000 pounds of copper were removed per pit. If 5000 pits existed, as earlier estimates indicated (and all are copper bearing), then 100,000 pounds per pit in 5000 pits means that 500,000,000 pounds of copper were mined in prehistoric times - all of it without anything more than fire, stone hammers and manpower. If the one sampled 15%, and if more than 5000 pits existed, then over 1.5 billion pounds of copper were mined".

Where did all of this supposed copper go? Some scholars would have us believe that the vast majority was taken by Phoenicians, Berbers, Bronze Age Europeans or Vikings in a vast international copper trade. Where is the archeological evidence to support these theories? The truth is, it does not exist.

The estimates made by Drier and Du Temple have been debunked. They erroneously assume that the average pit was 20 feet in diameter and 30 feet deep. Few pits have ever been reported as deep as 30 feet, and many ancient pits barely scratched the surface. Their 5 to 15% copper content is flawed since content can run from zero to 100% (mass copper). The amount of copper in the country rock isn't constant or regular, an expensive fact learned by many early modern mining companies. Their use of 5000 pits can not be shown to be accurate as there has been no organized effort to count the pits, and the figure of 1.5 billion



pounds of copper would mean there were 10,000 ancient copper pits averaging 20 feet in diameter and 30 feet deep, there is no supporting evidence for this. All the numbers offered up by Drier and Du Temple are based on conjecture, not fact.

(left) Variety of copper spearpoints, fishtail tang points second and third from left.

So much for flights of fancy, let's now look at how the Old Copper Complex Indians produced their copper tools, weapons and ornaments. The Old Copper Complex did not possess the technology to cast copper, so it had to be either cold-hammered, which yields a brittle metal, or annealed (heated and then worked to prevent brittleness). Small stone hammers could be used to form basic shapes and then edges could be sharpened or shaped by being stone ground.



Diorama of Copper Culture Indians mining copper in the Keweenaw Peninsula of Michigan.

If one closely examines a large number of Old Copper Complex artifacts it becomes apparent that two types of copper were utilized and that each required a different method of manufacture. There are artifacts that are made of a chunk of copper beaten and ground to the desired configuration. A second type is made of thin sheet copper folded over and over, and then beaten and ground into the desired configuration, much like the famed Damascus swords. The multiple folds are known to

result in a superior cutting edge. Not surprisingly, these folds appear in spear points, atlatl dart points, knives, crescents, celts, awls, spuds and others. I have found artifacts with as many as six distinct folds. We have found hundreds of what are essentially scrap copper pieces associated with manufacturing sites. We also have formed copper "bars" that were most likely used as trade items. Given the primitive means of working the raw copper, the workmanship is excellent on many of these artifacts.



Partially formed point (right) and artifact (below) both showing folds.

