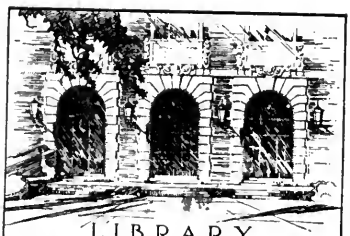

3 FIELDIANA · ANTHROPOLOGY

Published by
CHICAGO NATURAL HISTORY MUSEUM

Volume 36 NOVEMBER 8, 1957 No. 8

THE OLD COPPER CULTURE AND THE KEWEENAW WATERWAY

GEORGE I. QUIMBY
CURATOR, NORTH AMERICAN ARCHAEOLOGY AND ETHNOLOGY

AND

ALBERT C. SPAULDING
CURATOR OF ARCHAEOLOGY, MUSEUM OF ANTHROPOLOGY
ASSOCIATE PROFESSOR OF ANTHROPOLOGY, UNIVERSITY OF MICHIGAN

More than fifty years ago copper artifacts representative of the Old Copper culture were collected in impressive amounts from sites along the Keweenaw Waterway that crosses the Keweenaw Peninsula in Houghton County, Michigan. The southeastern or Portage Entry section of the waterway seems to have been most productive of sites. For instance, Charles E. Brown (1902) stated: "While on a recent visit to Milwaukee, Mr. John T. Reeder of Calumet, Michigan, exhibited . . . a particularly fine and interesting series of copper knives, arrow and spear points, a spud and crescent and a number of flint implements obtained from the extensive and interesting camp sites at Portage Entry, Lake Superior." Reeder himself states (1906, pp. 114–118) that copper implements have been found at the west end of the waterway, midway in its course at Pilgrim River and Dollar Bay, and at the east end. According to Reeder, the most productive site was at the southeast end of the waterway on the east side of the canal; he lists adzes or spuds, spears, knives, chisels, gouges, arrow points, eyed and eyeless needles, and "ornamental pins and ceremonial trinkets" from this site, and mentions a find of "a few implements, a small knife, arrow points, two ceremonial objects, and a number of needles and pins" at a depth of four to six feet in a small ridge. Two crescent-shaped objects and a spear from the Dollar Bay area are also mentioned by Reeder. In addition to the copper implements, "probably one or two dozen small flint arrow points" have been found at the northwest end of the waterway and from unspecified localities came

Library of Congress Catalog Card Number: 57–14891

No. 830

"a few flints, one old slate and one sandstone pipe of recent small pattern, and stone hammers without number."

In Chicago Natural History Museum there is a collection of about 33 copper artifacts from sites along the canal between Portage Entry and Hancock. These artifacts are part of a large copper collection obtained by purchase from Walter C. and Edward F. Wyman in 1893 and 1900. The collection obtained by the museum in 1893 was exhibited at the Chicago Columbian Exposition.

Seven objects of copper were found in a cache near the government lighthouse at Portage Entry. The Wyman brothers' note on this find is preserved in Chicago Natural History Museum records; it reads: "Knives and spears found at Portage ship canal lighthouse by the light keeper while digging a stump on the lighthouse grounds, when at a depth of fourteen inches. They were found all together during the summer of 1889, and obtained from William McGue, the lighthouse keeper."

These objects of copper are as follows:

One leaf-shaped spear point with rolled socket and rivet hole (cf. Wittry, 1951, type I-B1); length 16.2 cm. (fig. 86, left). Cat. no. 52256.

One leaf-shaped spear point with rolled socket and rivet hole (cf. Wittry, 1951, type I-B1); length 12.1 cm. (fig. 86, left center). Cat. no. 52257.

One leaf-shaped knife with gradually tapered tang; length 23.2 cm. (fig. 86, center). Cat. no. 52258.

One knife with outward-curved back, tang, and curved cutting edge; length 14.6 cm. (fig. 86, right center). Cat. no. 52259.

One knife with outward-curved back, tang and curved cutting edge; length 11.7 cm. (fig. 86, right). Cat. no. 52260.

One small fragment of worked copper. Cat. no. 52264.

One fragmentary awl, rectangular in section (cf. Wittry, 1951, type IV-A1); length 8.3 cm. Cat. no. 52344.

Another knife may have come from the cache under the tree stump, and in any case was found nearby. The museum record indicates only that it was found on the beach near the lighthouse at Portage Entry prior to May, 1889. This specimen can be described as follows:

One large knife of elongated triangular form with tapered tang and bifurcated base; length 32.4 cm. (fig. 86, bottom). Cat. no. 52254.

FIG. 86. Copper spear points and knives.

Four copper artifacts in the museum's collection are recorded as having been found in 1886 near the Portage Ship Canal, Lake Superior. These specimens are as follows:

One large knife of elongated leaf-shaped form; length 29.2 cm. (fig. 87, bottom). Cat. no. 52255.

One socketed knife with straight back and curved cutting edge (cf. Wittry, 1951, type II-C2); length 15.6 cm. (fig. 87, top right). Cat. no. 52261.

One tanged knife with straight back and curved cutting edge (cf. Wittry, 1951, type II-A1); length 15.2 cm. (fig. 87, top left). Cat. no. 52262.

One conical spear point with rolled socket (cf. Wittry, 1951, type I-L variant); length 6.4 cm. (fig. 87, middle left). Cat. no. 52263.

One group of seven copper artifacts from the Wyman collection is simply recorded as having come from the Lake Superior Ship Canal. Although the date the specimens were collected is not given, it was before 1893, as they were received by the museum in that year. These specimens are as follows:

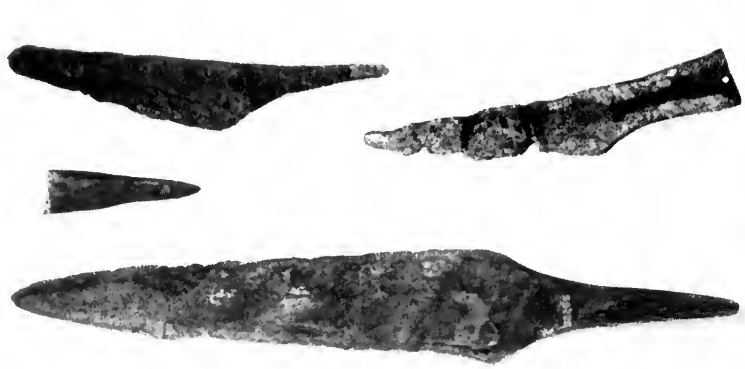

FIG. 87. Copper knives and spear point.

One narrow trianguloid celt with tapered poll and nearly straight cutting edge; length 29.8 cm. (fig. 88, left). Cat. no. 52340.

One leaf-shaped spear point or knife with rolled socket that has serrated edges cf. Wittry, 1951; (possibly a variant of type I-B); length 23.8 cm. (fig. 88, left center). Cat. no. 52341.

One awl, rectanguloid in section; length 15.9 cm. (fig. 88, right center). Cat. no. 52342.

One awl, rectanguloid in section; length 14.6 cm. Cat. no. 52343.

One spud or socketed axe (cf. Wittry, 1951, type V-D variant); length 15.2 cm. Cat. no. 52345.

One spud or socketed axe (cf. Wittry, 1951, type V-D variant); length 11.4 cm. Cat. no. 52346.

One tanged knife with straight or nearly straight back and curved cutting edge (cf. Wittry, 1951, type II-A1); length 20.6 cm. (fig. 88, right). Cat. no. 52348.

A group of six copper artifacts in the Wyman collection is merely recorded as having come from the Portage Canal near Hancock, Michigan. Although the date the specimens were collected is not given, it was before 1900, as they were received by the museum in that year. These specimens are as follows:

One leaf-shaped spear point with rolled socket and rivet hole (cf. Wittry, 1951, type I-B1); length 11.4 cm. (fig. 89, top left). Cat. no. 68013.

FIG. 88. Copper tools and weapons.

One narrow trianguloid spatulate form; length 19.0 cm. (fig. 89, bottom left). Cat. no. 68058.

One awl with rectangular section; length 18.1 cm. Cat. no. 68059.

One tanged knife with nearly straight back and curved cutting edge (cf. Wittry, 1951, type II-A1 variant); length 12.7 cm. (fig. 89, top left center). Cat. no. 68068.

One leaf-shaped knife or spear point with spatulate tang; length 10.6 cm. (fig. 89, top center). Cat. no. 68084.

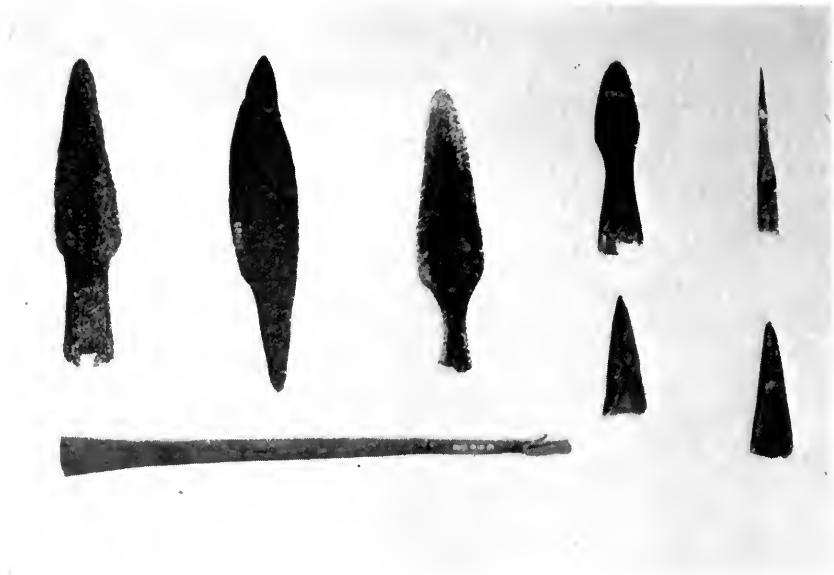

FIG. 89. Copper spear points, knives, and spatulate-shaped tool.

One leaf-shaped spear point with rolled socket (cf. Wittry, 1951, type I-B2); length 7.3 cm. (fig. 89, top right center). Cat. no. 68102.

Another group of six copper artifacts from the part of the Wyman collection received by the museum in 1900 is recorded only as having been found near the Portage Canal. These specimens, all collected before 1900, are as follows:

One tanged knife with straight back and curved cutting edge (cf. Wittry, 1951, type II-A1 variant); length 14.6 cm. Cat. no. 68133.

One leaf-shaped knife with rolled socket (cf. Wittry, 1951, type I-B2); length 7.0 cm. Cat. no. 68149.

One conical spear point (cf. Wittry, 1951, type I-L variant); length 4.4 cm. (fig. 89, bottom right center). Cat. no. 68150.

One socketed spear point with long narrow, straight-sided blade with rectangular section (cf. Wittry, 1951, type I-O); length 6.4 cm. (fig. 89, top right). Cat. no. 68151.

One fragment of worked copper. Cat. no. 68152.

One fragmentary blade, probably straight-backed, with tang and curved cutting edge; length 6.0 cm. Cat. no. 68153.

One conical spear point (cf. Wittry, 1951, type I-L variant); length 5.1 cm. (fig. 89, bottom right). Cat. no. 68154.

One narrow conical spear point (cf. Wittry, 1951, type I-L variant); length 3.3 cm. Cat. no. 68155.

The Museum of Anthropology of the University of Michigan gathered further data on the archaeology of the waterway in the summer of 1953 during the course of a survey of the upper Great Lakes made possible by a generous research grant from Mrs. Marion T. Dimick. The Michigan expedition investigated the Portage Entry site without finding any surface material, thus amply confirming Reeder's statement (1906, p. 117) that the site was practically bare by 1903. Several other localities reported to have produced one or more specimens were similarly investigated without result. However, one area on the property of Henry Garnell, although lacking surface material, had produced a number of copper and stone specimens which were available for inspection, and it was decided to investigate the site.

The Garnell site lies on the west side of the waterway about five-eighths of a mile east-northeast of the village of Oskar. The boundaries of the site are indefinite; it is simply an area extending along the waterway for perhaps half a mile on which specimens have been found when the land was plowed. It would be still more accurate to state that the specimens came primarily from two hay fields within this locality, the remainder of the area being forest and swamp. We did not find any surface material on the fields from which the specimens were collected, and Mr. Garnell stated that all of the artifacts he had found were turned out by the plow. A majority were found on the southwestern part of the area in the vicinity of the farm buildings at that point and from less than fifty to a few hundred feet from the waterway. A second area of concentration lay perhaps a quarter of a mile to the northeast in another field. Both of these areas are slightly elevated and relatively flat ridges emerging from the low and swampy ground characteristic of the locality. A topographic map of the southwestern area by John M. Dimick shows that all of the specimens were found at elevations below 612 feet above sea level (ten feet above the July, 1953, level of Lake Superior), and some were no more than two or three feet above the modern water level.

There are six chipped stone and ten copper specimens in the Garnell collection, all of which were photographed and described by John Dimick, and one additional chipped stone point from the

Garnell farm was seen in the collection of Irving Edwards of Houghton. The stone specimens in the Garnell collection include:

One stemmed projectile point (fig. 90, left), 8.9 cm. long.

One square-based knife or projectile point (fig. 90, left center), 7.7 cm. long. The tip of this specimen is broken.

One square-based knife or projectile point (fig. 90, center), 6.1 cm. long. This specimen is white quartz.

One stemmed or corner-notched projectile point (fig. 90, right center), 4.3 cm. long.

One square-based? knife or projectile point (fig. 90, right), 7.6 cm. long. This specimen appears to be quartzite. It has a broken tip.

One chip.

With the exception of the quartz and quartzite specimens noted in the list, the implements appear to be made from variously colored flints or chalcedonies. The varieties of materials suggest that the raw materials were obtained from the local gravels.

The stone specimen in the Edwards collection is a stemmed projectile point 4.8 cm. long and 1.9 cm. broad across the shoulders, its widest point. The stem expands slightly toward its base, and the appearance of the stem area is not very different from that illustrated in figure 90, right center, although the point as a whole is longer and more slender. It is made of quartz.

Copper specimens in the Garnell collections are:

Two tanged knives (fig. 91, left and left center), 13.0 and 7.9 cm. long.

One copper chisel-shaped tool with rounded edges (fig. 91, right center), 11.4 cm. long.

One fragmentary or unfinished bar with rounded end (fig. 91, right), 8.3 cm. long.

Four projectile points with rolled sockets (fig. 92), left to right respectively 6.5, 8.8, 9.4, and 9.7 cm. long. Three of these are subconical in form, but the fourth has slight shoulders and a definite separation of blade and socket.

Two adzes or chisels. The first of these is roughly rectangular in outline and 14.6 cm. long and 4.6 cm. broad. It is plano-convex in longitudinal section, with the greatest thickness about 5 cm. from one end. From this point it tapers gradually to each end. Both of the ends have bluntly rounded edges. The second specimen is fragmentary. In outline, the remaining part is parallel-sided with

FIG. 90. Projectile points or knives of chipped stone.

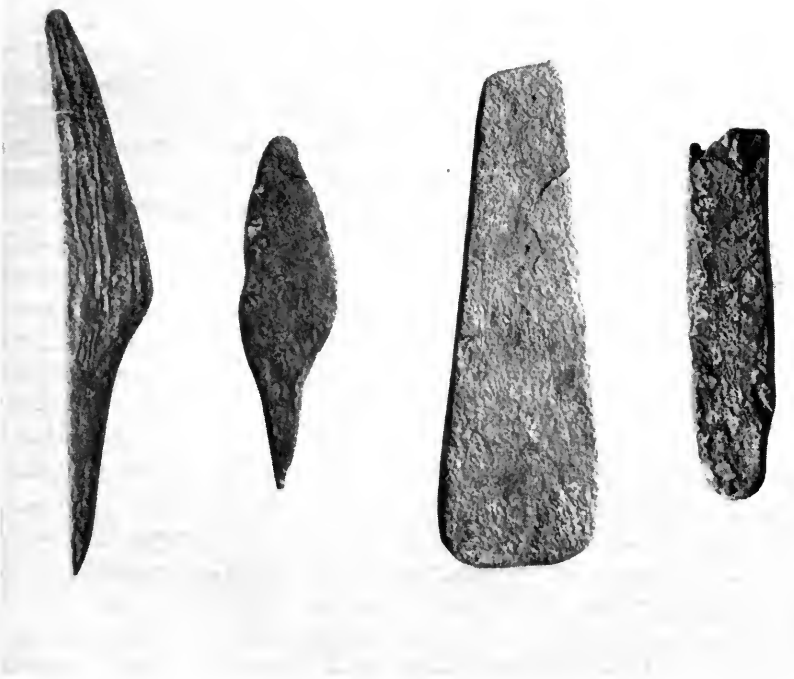

FIG. 91. Copper knives and tools.

FIG. 92. Copper projectile points.

a rounded end. It is 8.4 cm. long and 5.0 cm. broad. Its longitudinal section also shows a plano-convex form with a maximum thickness of 2.3 cm. at a distance of 6.5 cm. from the unbroken end. The top (convex side) is slightly concave when viewed in lateral section. The presumed cutting edge is somewhat rounded.

The University of Michigan party (Mr. and Mrs. Dimick, Hilary Hoover, Bruce B. Powell and A. C. Spaulding) excavated six test pits at the southwestern end of the site in an area where several specimens had been found. With the exception of a retouched flint flake found in the plow zone, no archaeological evidence of any sort was discovered. The excavations showed a darkened, gravelly plow zone underlain by sand and gravel to an elevation of 605 feet (about 3 feet above the 1953 level of Lake Superior). Below this elevation was a red clay which is also found on the bottom of the waterway. This disappointing result and the difficulty of digging in the gravel suggested a more vigorous approach, and through the co-operation of the Michigan Department of Conservation the party was able to dig by means of a fire plow a trench some 1,200 feet long, about a foot wide, and deep enough to expose a cleanly cut floor immediately below the humus line. The result was completely negative: no trace of artifacts, pits, charcoal, or other cultural debris was observed.

The party concluded that further excavation would be unprofitable and abandoned the site.

In summary, our positive information on the site consists of the surface finds and their approximate proveniences and the retouched flint flake found in the test pit. The latter (UMMA cat. no. 39722) is a nearly rectangular prismatic blade of black flint or chert 2.3 cm. in length and from 1.2 to 0.9 cm. in width. It has three longitudinal flake facets on its upper surface and one long edge is blunted by a steep and delicate retouching. The narrower end appears to have been broken across at some time after manufacture so that the original length of the tool was probably somewhat more than the measurement indicated. The question of whether or not these artifacts can be considered a meaningful assemblage is, of course, not definitely answerable with the information at hand. They did occur in two more or less circumscribed areas, and the copper implements are mutually related on technical grounds and on the basis of other information on the Old Copper culture. Clear association of the chipped stone artifacts with the copper is not easy to demonstrate, but the projectile points have a robust character which is at least not out of place in a presumed Archaic context. A clear and rounded picture of Old Copper flint work is not available, but such information as we have is consonant with the hypothesis that all of the points belong to the general period of the copper artifacts. The prismatic blade also represents a type at home in a preceramic context. On the negative side, we did not find obviously later material, and our extensive trenching revealed no trace of pits, charcoal, flint chips, sherds or other features which are commonly associated with later sites. It would seem on balance that the material collected probably does represent a comparatively ancient occupation or occupations.

THE NIPISSING DATE LINE

During the Nipissing stage of the upper Great Lakes, radiocarbon dated at about 2800–1500 B.C., the areas adjacent to the present Lake Superior Ship Canal were under water. Leverett and Taylor (1915, p. 460) state that the Nipissing beach level at the north end of the Portage Canal stands about 30 feet above the level of Lake Superior, and that at Houghton, Michigan, the Nipissing beach deposits stand about 26 feet above the level of Lake Superior. Hough (1953, fig. 26) indicates that the area of the present canal was under water during the Nipissing stage.

The U. S. Geological Survey topographic map of the Keweenaw Quadrangle (1954 ed.) indicates that the area around the lighthouse and much of the region bordering the Portage Ship Canal is less than 20 feet above Lake Superior and thus lower than the level of the Nipissing stage.

Certainly, then, the finds of copper from beneath the stump on the lighthouse grounds at the Portage Entry, from other localities in the vicinity, and from the Garnell site are from levels beneath those of the Nipissing stage, and this is very probably true of other finds near the waterway. Obviously the Old Copper occupation of the area could not have occurred during the Nipissing high water phase. Other evidence, including radiocarbon dates of 5,600 and 7,510 years ago (Libby, 1954, p. 740) for the Old Copper cemetery at Oconto, Wisconsin, suggests that the culture was well established in the period intervening between the Algonquin and Nipissing high water phases. If the waterway finds date from this period then they were submerged by the Nipissing water, and we have a possible explanation for the peculiar nature of the Garnell and other sites in the vicinity. The salient feature of these sites is the presence of a few comparatively heavy tools and a nearly complete absence of ordinary campsite debris such as flint chips, bone scraps, and charcoal. It seems quite possible that the slight reworking of shallow cultural deposits by the advancing and retreating water might produce this effect. The tools do not exhibit a heavily rolled or battered appearance, but this is not a fatal objection to the theory. The Garnell site would have been situated on a relatively quiet inlet, and even in the case of the more exposed Portage Entry site a rapid rise and fall of the water level would not have provided an extended opportunity for water action. The alternative explanation, a post-Nipissing dating, cannot be ruled out, but it has the disadvantage of requiring an inordinately long duration for the culture. Further, it fails to explain why a presumed habitation site should lack the refuse usually present. Although the problem is not definitely solvable with our information, we feel that the pre-Nipissing date is more probable. This tentative conclusion is in accord with data from finds made at Fort William, Ontario, where Nipissing deposits seem to overlie Old Copper artifacts (Quimby, 1954), and at Heron Bay, Ontario, where Nipissing deposits were on top of an Old Copper artifact (Bell, 1928).

BIBLIOGRAPHY

BELL, CHARLES N.
1928. An implement of prehistoric man. Thirty-sixth Annual Report of the Ontario Provincial Museum, pp. 51–54. Toronto, Ontario.

BROWN, CHARLES E.
1902. Archaeological notes. Wisconsin Archaeologist, vol. 1, no. 4, p. 102.

HOUGH, JACK L.
1953. Final report on the project, Pleistocene chronology of the Great Lakes region. Office of Naval Research, Contract No. N6 ORI–07133, Project NR–018–122. University of Illinois, Urbana. (Mimeographed.)

LEVERETT, FRANK, and TAYLOR, FRANK B.
1915. The Pleistocene of Indiana and Michigan and the history of the Great Lakes. United States Geological Survey, monograph 53.

LIBBY, WILLARD F.
1954. Chicago radiocarbon dates V. Science, vol. 120, no. 3123, pp. 733–742.

QUIMBY, GEORGE I.
1954. The Old Copper assemblage and extinct animals. American Antiquity, vol. 20, no. 2, pp. 169–170.

REEDER, JOHN T.
1906. Evidences of prehistoric man on Lake Superior. Historical Collections: Collections and Researches Made by the Michigan Pioneer and Historical Society, vol. 30, pp. 110–118. Lansing, Michigan.

WITTRY, W. L.
1951. A preliminary study of the Old Copper complex. The Wisconsin Archaeologist, (N.S.), vol. 32, no. 1, pp. 1–18.