

Copper Mining in the Ontonagon River Basin: Preliminary Results of the 2018 BSU Summer Field School

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Abstract

As part of a 3-semester Immersive Learning project, the 2018 BSU Summer Field School investigated site 20 ON 209, a placer copper mining site on the Ontonagon River within the Ottawa National Forest. Following the work of Ferrone (1999) we explored a copper processing area, conducted GPR survey of several pits and processing areas, and discovered two previously undocumented copper mining areas. We found evidence for substantial on-site processing of lithics and copper, and time depth for the mining activities indicating a likely deeper history of activity at 20 ON 209 and the other localities in the ONF than indicated by the diagnostic artifacts and dated material recovered by previous investigations.

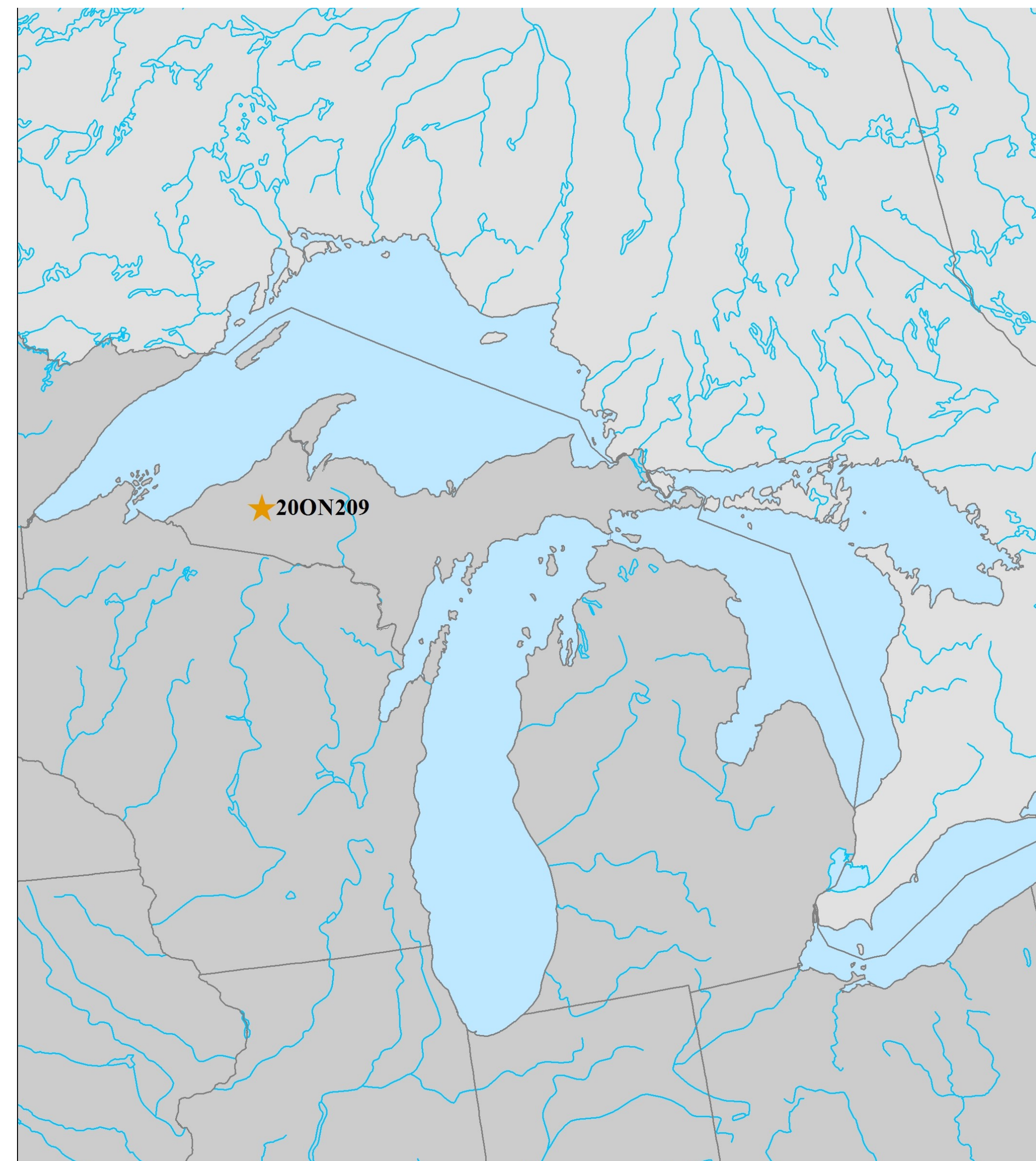


Figure 1: Location of Site 200N209 in Michigan

Site 200N209 is located in the Lake Superior basin of the Upper Peninsula of Michigan (see Figures 1 and 2). The site is situated in the Ottawa National Forest and is adjacent to the East Branch of the Ontonagon River. The site consists of two workshop areas and over 300 mining pits and trenches which are located throughout the site.



Figure 3: Left-to-right, top-to-bottom: David Byrd, Nicole Roberts, Lindsey Cron, Emily Demler, Charity Munro, Deion Hallmon, Dr. Mark Hill, Sage Hatcher, and Tristan Spoor



Figure 2: Location of Site 200N209 in Upper Peninsula of Michigan

Surveys were conducted in three different areas of 200N209: Locales A and B of Complex 1, and Complex 2. At all three locations metal detection and ground penetrating radar (GPR) (see Figure 6) surveys were performed by students. Only at Locale A did students also conduct a magnetometer survey, as well as dig excavation units, and map the area via a total station. In mapping Locale A, the site was lined up at 30° below cardinal directions in order to better fit the entirety of the site within a map. It was soon learned that Troy Ferone had done this when mapping the site during his excavation in 1996.



Figure 4: Unit 10 (top) and Emily Demler, Nicole Roberts, and Lindsey Cron excavating Unit 9 (bottom)

At Locale A, three excavation units were dug and were labeled 8, 9, and 10 (Figures 4 and 5 respectively) to continue the chronological number sequence of Ferone's 1996 excavation units in hopes of avoiding confusion in the future. Units were 2x2m, 1x2m, and 1x1m in size respectively, resulting in a total of seven square meters of excavated area. Each unit level was three centimeters deep and was concluded with mapping, soils analysis, and photographs of the unit by groups of approximately four students. When possible charcoal or features were encountered, students collected samples. At the conclusion of each unit, walls with visible soil changes were profiled and photographed. Pennies and tree branches were left at the bottom of units before they were backfilled.



Figure 5: David Byrd and Tristan Spoor excavating Unit 8

Metal detection surveys at Locale B yielded very little, only revealing an old excavation unit from Ferone's excavation. It is possible that looters were able to locate the site since his excavation.

Complex B was "rediscovered" by Dr. Mark Hill and Dr. Kevin Nolan upon an end-of-day hike from Locale A. Contact with the Forest Archaeologist revealed that the site was recorded in 1986 and was within our project area. Two small survey areas, 5x6m and 3x3m in area, were surveyed with GPR and metal detectors by a small group of students. The metal detection surveys yielded no artifacts.



Figure 6: Dr. Nolan (left) supervising students Sage Hatcher, Matthew Nichols, and Tristan Spoor in GPR survey of Locale B

Upon the conclusion of the excavation, flags and flagging tape were removed from marked trails and survey areas. Pins with flagging tape were left to mark the corners of units and survey areas, and were covered by leaves to prevent removal by animals or discovery by looters.



Figure 7: Copper awl and worked copper piece found at Locale A

A variety of artifacts were found at 200N209 including lithic flakes and tools (see Figure 8), fire cracked rock, worked copper, and a copper tool. All collected artifacts were found at Locale A during excavation. Though some artifacts were found in situ, many were found in the screening process. Most of the recorded copper artifacts were not identified during the digging or screening processes and were later found in the backfill pile with the use of a metal detector wand, thus the original locations of these artifacts are unknown. Exact numbers of artifacts are currently unknown, as analysis and cataloging has not yet been completed.

A small number of diagnostic artifacts were found during the field school including a copper awl (see Figure 7) and a net sinker (see Figure 9).



Figure 8: Anvil Stone found at Locale A

The artifacts and information gathered from the summer 2018 field school at 200N209 are currently being processed at Ball State University. Dr. Hill is conducting a Special Topics in Archaeology course that is focused on processing and analyzing the data recovered from this field school. Students in this class are currently washing, identifying, and cataloging artifacts. Later on they will conduct and examine flotation samples, pXRF test, and soil analyses. Analysis of survey methods carried out in the field school, including ground penetrating radar and gradiometry, will also be concluded in this class. It is anticipated that a full site report and several research articles will be completed by the class. As for the site of 200N209, there is much archaeological potential left to discover. Much of the site remains unexcavated, and the exact boundaries are still unknown.



Figure 9: Net sinker found at Locale A

References

- Ferone, Troy Joseph
1999 Terminal Woodland Copper Procurement Strategies in the Southern Lake Superior Basin. Master of Arts dissertation. Department of Anthropology, Michigan State University, Ann Arbor.

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