

Prehistoric human activity around the Hiroppara wetland, central Japan: a case study in and around the obsidian sources

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The Hiroppara wetland is located about 1.5 km to the north of Wada-toge, a well known obsidian source 1,400 m above sea level. Many prehistoric sites and geological obsidian sources are scattered around this area.

Through general surveys and small-scale excavations conducted by the former Wada Board of Education between 1989 and 1991, several prehistoric sites were identified around the wetland. In 2011, the Center for Obsidian and Lithic Studies (COLS), Meiji University began a new research project on this wetland and the prehistoric sites around it. Our research goal is to reveal the relationship between human activities in and around the obsidian sources and paleoenvironmental changes during the late Late Pleistocene (Upper Palaeolithic) to the Early Holocene (Incipient to Early Jomon period). This presentation is a preliminary report of our research, with a particular focus on the results of our archaeological excavations.

On the basis of results of previous surveys and our observations of the topographical features around the wetland, we distinguished the archaeological landscape around the wetland into seven sites, which we numbered from I to VII. The COLS has set up an excavation area 1 (EA-1) at site I and excavation area 2 (EA-2) at site II.

Excavations at EA-1, the Hiroppara I site, and EA-2, the Hiroppara II site, have revealed the following:

1. EA-1

- 1) This site yields evidence of an Early Upper Palaeolithic lithic industry from layer 6 (under the Aira-Tn tephra).
- 2) The latter part of the Late Upper Palaeolithic industry, represented in layers 2b and 3, primarily features bifacial points with a blade core.
- 3) Incipient to Early Jomon period assemblages are found in layers 2a and 2b.

2. EA-2

- 1) The early part of the Early Upper Palaeolithic industry, from layers 4a and 4b, yields an "obsidian concentration" characterized by a dense lithic concentration in a small area mainly composed of large lithics. Layers 4a and 4b contain the Aira-Tn tephra and a ground-edge stone ax made from tremolite rock.
- 2) The latter part of the Late Upper Palaeolithic industry, from layer 3, appears to be a knife-shaped tool industry using a developed blade technique.
- 3) Jomon pottery of the early part of the Initial Jomon with pebble concentrations and a pit, arrowheads, and cobble tools.

These new findings expand the scope of information about multilayered prehistoric occupations at the Hiroppara I and II sites. In addition, it has allowed us to extract a significant amount of information on prehistoric human behavior with specific regard to exploitation, transportation and consumption of obsidian during the late Late Pleistocene to the Early Holocene. However, these issues require further study.

Keywords: Obsidian sources, Central Japan, Hiroppara wetland, Hiroppara site group, Jomon period, Upper Palaeolithic