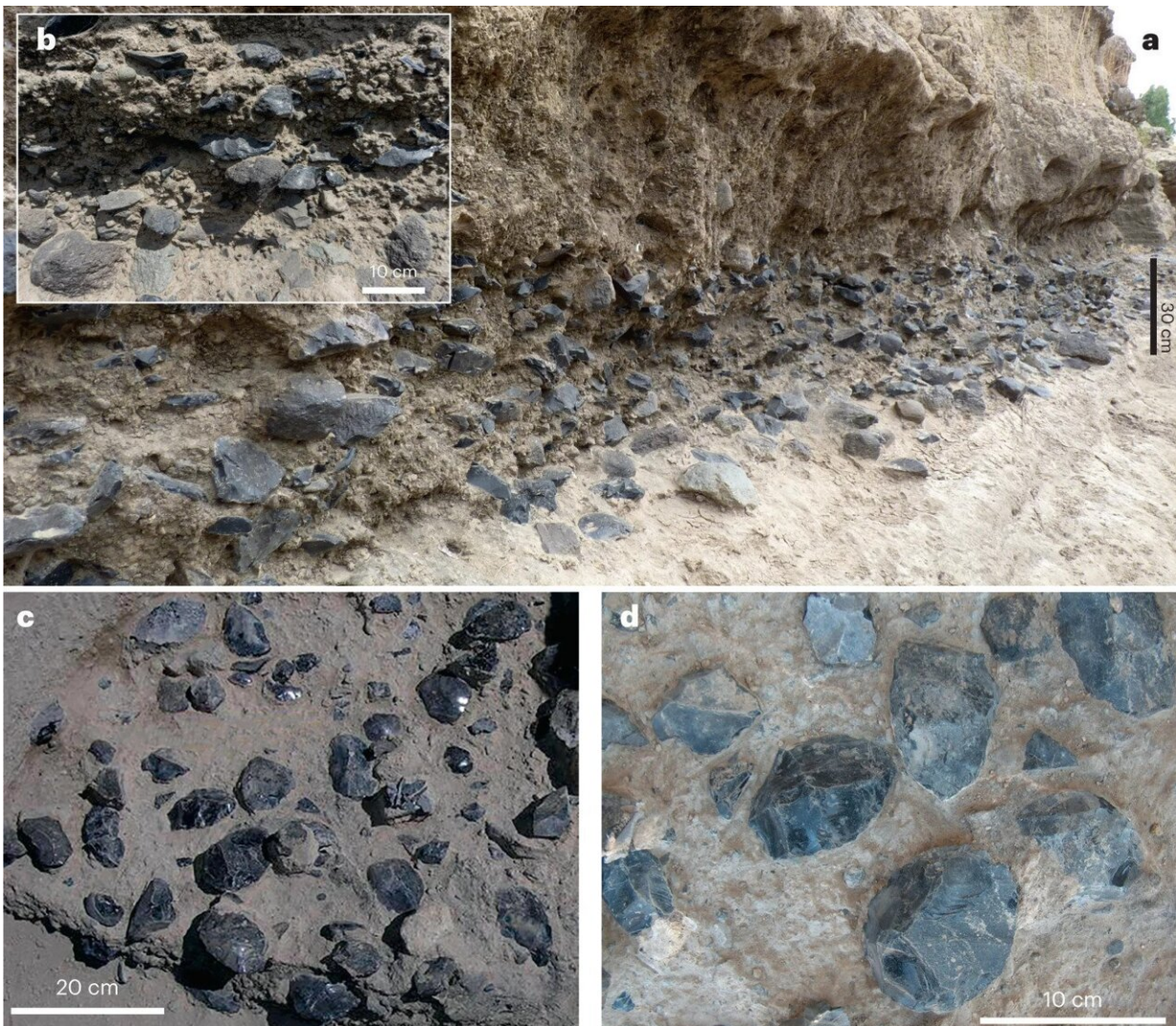


# Obsidian handaxe-making workshop from 1.2 million years ago discovered in Ethiopia

January 26 2023, by Bob Yirka



The extensive accumulations of obsidian artefacts in level C. a,b, General view of the level and detail of artefact density along the MS cliff (a) and inset (b). c,d, General view (c) and detail (d) of the artefact concentration (mainly handaxes) in

the test pit of 2004. Credit: *Nature Ecology & Evolution* (2023). DOI: 10.1038/s41559-022-01970-1

A team of researchers affiliated with several institutions in Spain, working with two colleagues from France and another from Germany has discovered an Obsidian handaxe-making workshop from 1.2 million years ago in the Awash valley in Ethiopia. In their paper published in the journal *Nature Ecology & Evolution*, the group describes where the handaxes were found, their condition and their age.

The Stone Age lasted from approximately 2.6 million years ago, to approximately 3,300 BCE, when the Bronze Age began. Historians generally break the era down into the Paleolithic, Mesolithic and Neolithic periods. Prior research has shown that "knapping workshops" appeared sometime during the Middle Pleistocene, in Europe—approximately 774,000 to 129,000 years ago.

Such workshops developed as tool-making evolved into a skill. Individuals who developed such skills worked together in workshops to crank out enough of whatever tools were needed by those in the general area. One such tool was the handaxe, which could be used for chopping or as a weapon.

Handaxes were made by chipping bits off of a stone to make a sharp edge. They were not attached to anything; they were simply held in the hand when in use. The stones used were typically flint or, in latter times, obsidian—a type of volcanic glass. Obsidian, even in [modern times](#), is considered a difficult material to work with because it is so rough on the hands. In this new effort the researchers have found evidence of an obsidian handaxe knapping [workshop](#) established far earlier than one has ever been seen before.

The researchers were working at the Melka Kunture dig site when they found a handaxe buried in a layer of sediment. They soon found more. They found 578 in all, and all but three were made of [obsidian](#). Dating of the material around the [axes](#) showed them to be from approximately 1.2 million years ago.

Study of the axes showed them all to have been crafted in like manner, indicating that the researchers had found an ancient knapping workshop. The find marks the oldest known example of such a workshop, and the first of its kind not in Europe. The researchers note that the work was done so long ago that they are not even able to identify the hominids that made them.

**More information:** Margherita Mussi et al, A surge in obsidian exploitation more than 1.2 million years ago at Simbiro III (Melka Kunture, Upper Awash, Ethiopia), *Nature Ecology & Evolution* (2023). [DOI: 10.1038/s41559-022-01970-1](https://doi.org/10.1038/s41559-022-01970-1)

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