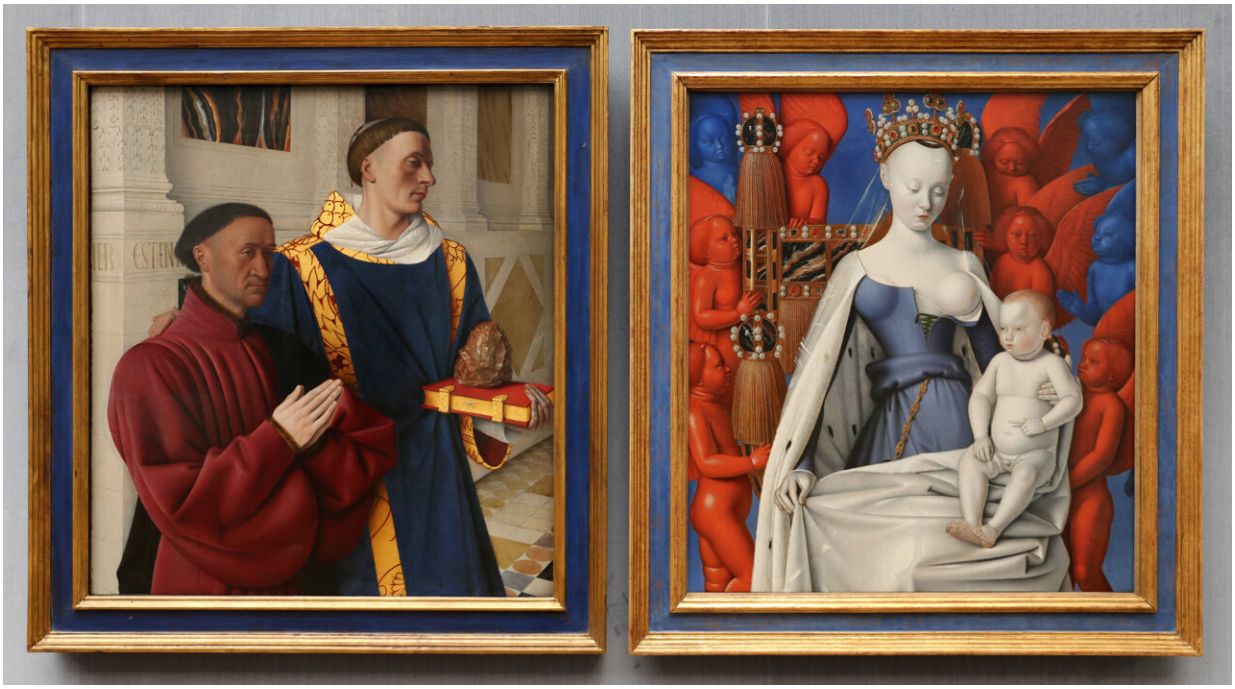
A 15th century French painting depicts an ancient stone tool

October 18 2023



The two panels of "The Melun Diptych" (circa 1455) by Jean Fouquet: "Étienne Chevalier with Saint Stephen" (on the left), and "Virgin and Child Surrounded by Angels," in an exhibition at the Gemäldegalerie in Berlin, Germany. Credit: Sailko, CC BY 3.0.

More than 500,000 years ago, our human ancestors used large, stone tools known as "Acheulean handaxes," to cut meat and wood, and dig for tubers. Often made from flint, these prehistoric oval and pear-shaped

tools are flaked on both sides and have a pointed end.

Handaxes have long been a source of fascination in our social and cultural history. Prior to the Enlightenment in the 17th and 18th centuries, people thought that they were of natural origin and referred to them as "thunderstones shot from the clouds," according to texts, with the earliest records dating back to the mid-1500s.

But researchers from Dartmouth and the University of Cambridge have identified that "The Melun Diptych" (circa 1455), painted by Jean Fouquet, depicts what is likely the earliest artistic representation of an Acheulean handaxe, demonstrating that these objects had an even earlier place in the modern world. The findings are published in the *Cambridge Archaeological Journal*.

"The Melun Diptych" was commissioned by Étienne Chevalier, who was from Melun, France, and served as treasurer for King Charles VII of France. The diptych is comprised of two oil paintings on wood panels: "Étienne Chevalier with Saint Stephen" on the left, and "Virgin and Child Surrounded by Angels" on the right.

The researchers found that an Acheulean handaxe appears to have been represented in the left panel. In the painting, Chevalier is depicted wearing a crimson robe with his hands folded together as if he were praying while Saint Stephen, his patron saint, is standing next to him holding the New Testament as a stone object resembling a handaxe rests on top of the book. The stone object symbolizes the death by stoning of Saint Stephen, the first Christian martyr.

Fouquet is considered one of the most important French artists prior to the Renaissance given his ability to work with oil paint.

Art historians have always referred to the stone in "The Melun Diptych"

as a "jagged stone" or a "large, sharp stone," but no one had ever identified it as something human made. However, Steven Kangas, a senior lecturer in the Department of Art History at Dartmouth and study co-author, had a hunch that it wasn't just a rock.

"I've known about Fouquet's painting for years and I had always thought that the stone object looked like a prehistoric tool," says Kangas. "So, this was always sort of stuck in the back of my mind, as something that I needed to pursue in the future."

That future arrived in 2021 when Kangas attended a seminar at Dartmouth about the Isimila site in Tanzania, which is famous for handaxes. The talk was delivered by Montgomery Fellow Charles Musiba, a professor of anthropology at the University of Colorado-Denver and expert on human origins in Tanzania and South Africa.

After the seminar, Kangas chatted with Musiba and Jeremy DeSilva, a professor and chair of the Department of Anthropology at Dartmouth and co-author. Upon showing them a picture of the left panel of "The Melun Diptych," the fellow professors agreed the stone object in the painting resembled a handaxe.

Close-up detail of the hand-axe like object in Jean Fouquet's "Étienne Chevalier with Saint Stephen," left panel of "The Melun Diptych" (circa 1455) by Jean Fouquet. Credit: Sailko, CC BY 3.0.

To investigate this further, the researchers collaborated with colleagues at the University of Cambridge, who led the analyses of the painted stone object in the diptych.

The team conducted three analyses. They investigated the overall teardrop shape of the stone object in the painting using an approach called Elliptical Fourier Analysis, which quantifies the shape of an object. They found that its shape was similar (within 95%) to other

Acheulean handaxes from the region where the paintings were made.

The researchers examined the stone object's color and compared its color to that of 20 French Acheulean handaxes. Although the colors in the painting are possibly distorted by the pigment and varnishes that have been applied, the color-variation on the object's surface of yellow, brown, and red hues was consistent with other handaxe artifacts.

As the co-authors report in the study, the high level of color-variation on the surface indicates that Fouquet went to great care and detail to paint the stone object. An infrared analysis of the painting revealed both an underdrawing and an underpainting for which the stone object had clearly been reworked.

Although an artist always has artistic license when creating their work, it's possible that Fouquet may have been replicating an actual handaxe or recreating one from memory. "Fouquet seems to have taken a special interest in the stone object, probably because he had seen one that struck his attention and imagination," says Kangas.

The researchers counted the flake scars on the surface of the painted stone object. On average, they found 33 flakes on the surface, which was consistent with the average identified on 30 handaxes that were randomly selected from their French handaxe assemblages.

"The data from our shape, color, and flake scar analyses of the stone object in the painting were remarkably consistent with that of other Acheulean handaxes from where Fouquet lived," said co-author James Clark, a graduate student in the Department of Archaeology at the University of Cambridge.

Prior research has provided evidence of pre-Homo sapiens species in Europe using Acheulean handaxes, making them one of the longest-used

tools and most investigated Paleolithic artifacts.

"I love this idea of connecting a handaxe—a utilitarian object that helped hominins survive half a million years ago—with a medieval French painting, which is so well-known that it's taught in introductory art history classes," says DeSilva. "From the Paleolithic Age to the Renaissance and beyond, handaxes have been—and continue to be—part of human history."

More information: Alastair Key et al, Acheulean Handaxes in Medieval France: An Earlier 'Modern' Social History for Palaeolithic Bifaces, *Cambridge Archaeological Journal* (2023). DOI: 10.1017/S0959774323000252

Provided by Dartmouth College

Citation: A 15th century French painting depicts an ancient stone tool (2023, October 18) retrieved 28 April 2024 from https://phys.org/news/2023-10-15th-century-french-depicts-ancient.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.