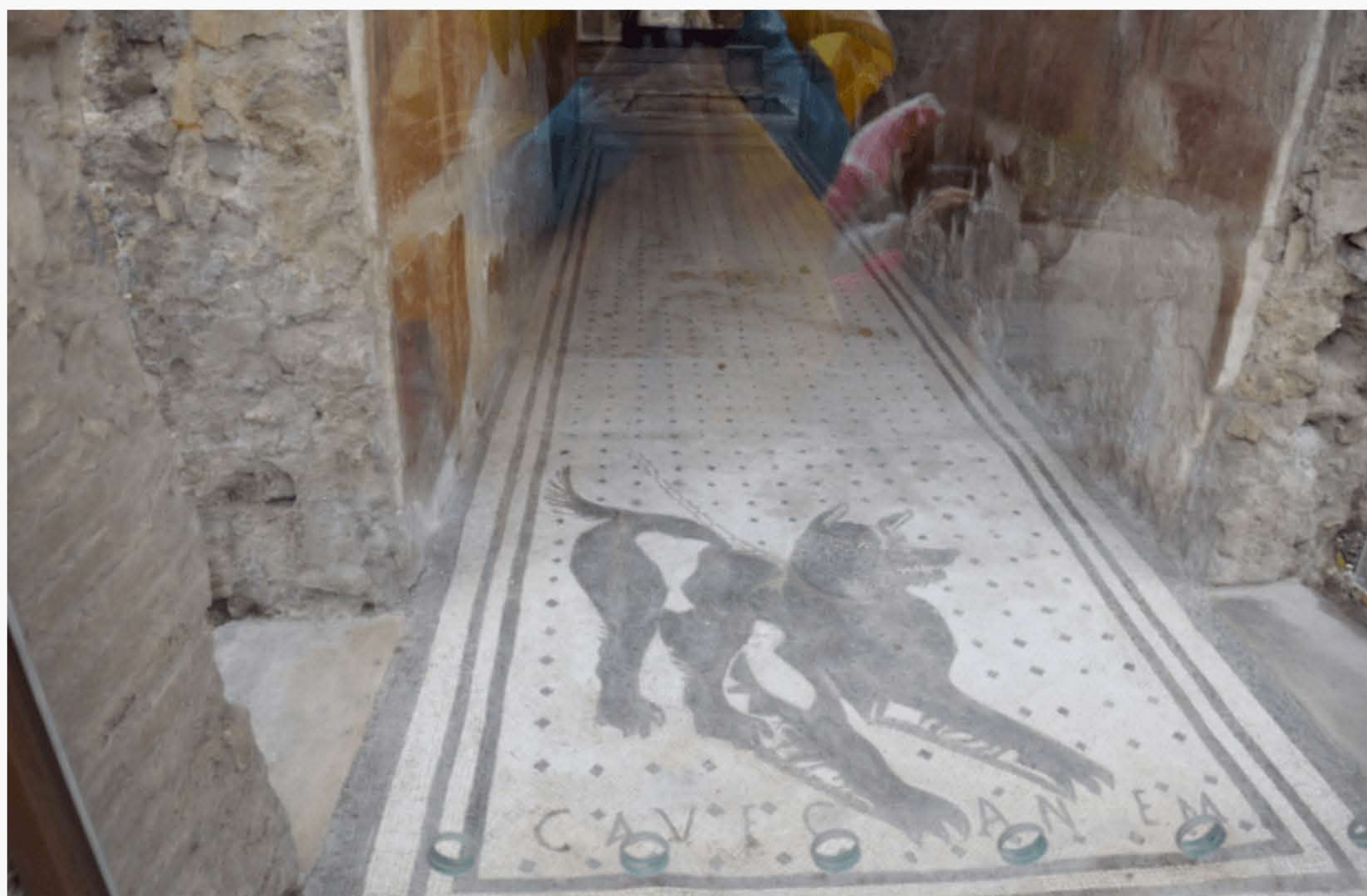


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New shade of grey: Pompeii study reveals ancient Roman artists' pigment techniques

New study reveals a previously unknown use of color in Pompeian art.

By JERUSALEM POST STAFF
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House of the Tragic Poet, Pompeii.
(photo credit: Melissa Herzog. Via Shutterstock)

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A recent study offers new insights into the pigments used by ancient Roman artists in Pompeii, revealing how they mixed raw materials to achieve a wide range of color tones.

Titled "Pompeian Pigments: A Glimpse into Ancient Roman Coloring Materials" [the study was published in the Journal of Archaeological Science.](#)

The investigation focused on the study of pigments found in exceptional Pompeian contexts, dating from the 3rd century BCE to the eruption of 79 CE.



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"It is an essential study also for the restoration of Pompeian frescoes, which are very fragile and require in-depth knowledge for proper conservation," stated Gabriel Zuchtriegel, [the Director of the Archaeological Park of Pompeii.](#)

The study covers almost the entire painting palette of ancient Roman painters. The color range is composed of natural and synthetic pigments, both inorganic and organic. The composition of the pigments was revealed thanks to a non-invasive analytical approach that combines microscopy with spectroscopy, designed to preserve the artifacts for the future.

Notable results include the identification of the first known use of a new gray color in Pompeian art. The presence of barite and alunite in the pigments provides the first evidence of the use of barium sulfate in the Mediterranean in ancient times.

"This study represents a significant step forward in understanding the painting techniques of the ancient Romans," said Celestino Grifa, Associate Professor of Petrology at the Department of Sciences and Technologies of the University of Sannio, according to [Finestre sull'Arte.](#) "The ability to accurately quantify coloring compounds in mixtures has allowed us to review the artistic process of wall paintings, which involved mixing pure pigments—particularly Egyptian blue, white, and lead red—that were skillfully proportioned to create the desired palette," he added.

The research focused on the red room of the House of the Tragic Poet, further enriching the understanding of the painting techniques of the period. "Similar analyses are already underway for the recently discovered Dionysian megalography. An exemplary synergy between research and protection that expresses Italian excellence in this sector," stated Zuchtriegel, as reported by [Finestre sull'Arte.](#)

The research is the result of a collaboration between the Archaeological Park of Pompeii, the Mineralogy and Petrology research group of the Department of Sciences and Technologies of the University of Sannio, and scholars from the Department of Earth, Environment and Resources of the University Federico II of Naples.

The article was written with the assistance of a news analysis system.

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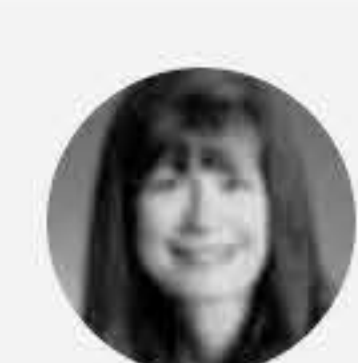
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