



Antiquities Conservation Intern (2018-2019) Kate Kowalska (left) and curator Claire Lyons (right) studying and rehousing carved bone fragments from a funerary couch (Gift of Herbert L. Lucas, inv. 87.AI.101.1-.359). Behind, a 5th-century travertine sculpture of a boar, believed to come from central Italy (inv. 83.AA.366), is also the subject of a technical study.

Antiquities Conservation is undertaking the study of objects in the Etruscan and Italic art collection in support of a forthcoming catalog on *Etruscan and Italic Art in the J. Paul Getty Museum*, authored by curator Claire Lyons. The collection comprises ceramics, bronze statuettes and vessels, architectural and free-standing sculpture, painted plaques, terracotta votives, jewelry and gemstones, ambers, armor, and ivory and bone reliefs. Because many of the Getty's Etruscan objects have not been extensively published, they offer valuable points of departure for technical and scientific analyses of ancient materials, sources, authenticity, and artistic practices. Several ongoing projects are contributing new data to current international interest in architectural painting and fine metalwork, genres in which Etruscan artisans excelled. Three highlighted recent projects are described here.



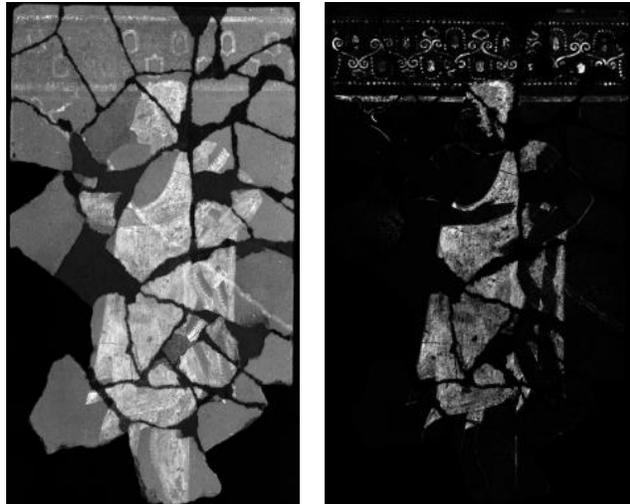
Painted Wall Panel with an Athletic Trainer, 520–510 B.C. Etruscan. Terracotta and pigment, 34 5/8 × 20 11/16 × 1 3/4 in. The J. Paul Getty Museum. Gift of Barbara and Lawrence Fleischman. 96.AD.140

Technical research on five Etruscan wall paintings

The wall paintings in the Getty collection represent a group of fired terracotta panels with painted decoration depicting figural and decorative geometric patterns. Although the construction and color schemes are similar, subtle differences in pigments and binding media raise interesting questions about panel production. Three Etruscan wall paintings (inv. 83.AD.211.3, 83.AD.211.4, 96.AD.140) and two painted architectural revetments (78.AG.300, 78.AG.355) were examined to better understand the materials and techniques used for their fabrication. The imaging methods utilized in the study were raking light, ultraviolet radiation, infrared reflectography, and macroscopic examination using a digital microscope. Scientific analysis in collaboration with the Getty Conservation Institute (GCI) involved portable X-ray fluorescence (XRF), Raman spectroscopy for pigment identification, and gas-chromatography mass spectrometry for binding media analysis. Panel 96.AD.140 was additionally studied using macro XRF mapping (pictured on the left) which identifies and maps elements across the entire surface of the object, helping characterize the pigments used.



Wall painting undergoing macro XRF mapping analysis.



Iron (right) and Manganese (left) distribution maps. Areas with dense concentrations of these elements appear white.



Comb Brooch, 700–650 B.C., Etruscan. Silver and gold, 2 3/16 × 2 1/4 × 3/8 in. The J. Paul Getty Museum. Gift of Alan Salke. 81.AM.175

Conservation and technical analysis of an Etruscan comb brooch

This ornate comb brooch consists of multiple hooks (like the teeth of a comb) attached to a gold-laminated silver plaque embellished with filigree, a technique of applying wires to create lacy patterns. At slightly over two inches long, the brooch exemplifies the Etruscans' mastery of fine metalwork and metallurgy.

More information on the study of this object can be found here on the Getty's blog. <https://blogs.getty.edu/iris/a-rare-etruscan-brooch-rediscovered/>



Appliqué for a funerary couch, 150-50 B.C., Etruscan or Italian. Bone. The J. Paul Getty Museum. Gift of Herbert L. Lucas. 87.AI.101.123

Carved bone appliqué from a funerary couch

A group of 359 bone appliqué and fragments of relief figures, decorative friezes, and plain veneers, dating to 150-50 B.C., are being catalogued and studied. Now fragmentary and separate, these appliqué originally would have served as painted and gilded veneers on a funerary couch. Conservators Susan Lansing Maish and Jessica Arista, together with curator Claire Lyons are looking for evidence of original polychromy, examining tool marks, and making connections between fragments. On several appliqué, examination under the digital microscope revealed traces of red, pink, and yellow pigment as well as traces of gilding. Additionally, tool marks are evident as scoring incisions on the backs and sides of the fragments. To create ornaments and figures in relief or nearly in the round, smaller laminations of bone were adhered together to create a larger piece and then carved to shape. To confirm whether ancient artisans used bone or ivory and to identify the animal species, several objects were sampled and analyzed using Peptide Mass Fingerprinting (PMF), a bioanalytical technique that identifies proteins in a sample.

The appliqué tested to date have been identified as cattle bone.



Antiquities conservator Jessica Arista examining tool marks on the bone appliqué under magnification with a Keyence digital microscope.



Above, an image taken with the digital microscope shows a flake of gold foil embedded in the headdress of this fragment known as "Head of a Bacchant." (Gift of Herbert L. Lucas. 87.AI.101.120)

