



## The Museum's White Marbles

by Benton Kidd, Curator of Ancient Art

Fans of home improvement TV programs are undoubtedly familiar with Carrara marble, the pricey white stone coveted for kitchen and bath makeovers. But few may realize that Carrara's long history of use stretches back 2,300 years to the Roman Republic. Moreover, the ancient Mediterranean abounded in white marbles with varying characteristics. Whether coarse- or fine-grained, translucent or opaque, veined or unveined, an abundance of choices existed for architecture, sculpture, and other objects. Since the 1980s, analyzing marbles by their isotopic signatures has allowed marble objects to be accurately sourced, revealing how these valued trade commodities moved around the ancient Mediterranean. Isotopic testing of the Museum's white marble antiquities have revealed some interesting results.

Marble is a metamorphic rock, or one that has undergone a compositional change as a result of heat and pressure. Most marbles were originally limestone or dolomite, which solidified into a denser, crystalline form after exposure to extreme heat and compression. Thirty million years ago, the collision of the African and European plates compressed and heated large quantities of Jurassic limestone in northwestern Italy, today near the town of Carrara in the region of Tuscany. Romans began quarrying the resultant marble in the second century BCE, and the nearby port of Luna (or Luni) allowed shipment of the prized stone to other parts of the Mediterranean. Over 600 quarrying spots have been identified around Carrara, and geologists estimate that more marble has been quarried from this spur of the Apuan Alps than any other quarry on the planet. The pure white Carrara variety known as "Statuario," long the choice for sculpture such as Michelangelo's *David* (completed 1504) and the Museum's *Bathing Nymphs*, is said to be completely exhausted, and what is quarried today contains blue-grey veining. A detail of the *Bathing Nymphs* reveals Statuario's shimmering, sensuous quality, which made it so appealing to artists since antiquity. The crystalline structure of marble allows it to be polished to varying degrees of gloss. As the crystals are flattened by abrasion, they become increasingly reflective, like tiny mirrors.



Detail showing reflective crystals



Johann von Halbig (German, 1814–1882)  
*Bathing Nymphs*, 1867  
Carrara marble  
Purchased with monies from the Unrestricted Development Fund, MU (80.218)

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Ancient Greece had no shortage of white marbles, with some quarries still active today. Perhaps the most famous is Pentelic, which was quarried from Mt. Pentelikon (or Penteli) near Athens. The buildings of the Acropolis, including the Parthenon, were constructed almost entirely of Pentelic marble. The stone is no longer quarried commercially, but some has been extracted in recent years for the restoration of the Acropolis structures. Romans were not content with their supply of Carrara marble, and often imported other stones such as Pentelic.\* They admired Pentelic's translucency and the golden patina it gained from weathering. The Museum's fragment of a large garden urn, or *krater*, is made of Pentelic marble and once probably decorated a Roman patrician's garden. The use of an imported marble undoubtedly gave the *krater* a heftier price tag.

Several Greek islands, including Paros and Thasos, were home to prolific white marble quarries. Fine-grained and semi-translucent, Parian was among the most prized of all white marbles, and its creamy luster was perfect for the best quality portraits. Though sculpture was often painted, the flesh areas of human figures made of Parian marble may have been left white, or only lightly tinted so as not to obscure the marble's quality. Two portraits in the Museum's collection, one of a Ptolemaic queen (perhaps Arsinoë III; r. 220–204 BCE), the other of the emperor Nero (r. 54–68 CE), were both sculpted from Parian marble. Both portraits come from Egypt, which was rich in limestone and granite, but not white marble. The stone would have therefore been



**Fragment from a Krater Depicting Hermes**  
Roman, late 1<sup>st</sup>–early 2<sup>nd</sup> century CE  
Probably made in Rome  
Pentelic marble  
Weinberg Fund and Gilbreath-McLorn Museum Fund (88.33)



Line drawing showing reconstructed relief krater



**Portrait of a Ptolemaic Queen**  
(Arsinoë III?)  
Greek, Hellenistic, 3<sup>rd</sup> century BCE  
Allegedly from Alexandria, Egypt  
Parian marble  
Gift of Mr. Leonard Epstein (61.66.1)



**Portrait of the Emperor Nero**  
Roman, ca. 60–68 CE  
From Egypt  
Parian marble  
Gift of Mr. T. E. Bachman (62.46)

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imported from the Aegean, making it even more costly but hardly unexpected for royal commissions. Larger commissions of Parian marble were also created, such as the famed Aphrodite of Melos (aka *Venus de Milo*, ca. 150 BCE), today in the Louvre. As early as the seventh century BCE, yet another white marble was quarried from the Aliko peninsula on the southeast coast of the island of Thasos. The Carrara and Pentelic quarries were located in mountains, which made them difficult and dangerous to access, but the coastal Aliko quarry made the stone accessible and easily transferred to ships for export. Thasian marble is dolomitic (largely composed of dolomite) and is known for its large, “sugary” crystals. Notoriously hard and difficult to carve, it required special skill to work into fine detail. It was nonetheless used for portraits and sarcophagi, the Museum’s Roman circus sarcophagus being one such example.



**Front Panel from a Child's Sarcophagus**

Roman, ca. 190–220 CE

Perhaps made in Rome

Thasian marble

Silver Anniversary Gift of UMC Development Fund Board and Boone County Community Trust (83.65)

Finally, Asia Minor (Turkey) was rich in marbles, both in white and colored varieties. The island of Prokonessos (today Marmara Island) located in the Sea of Marmara had another quarry readily accessible to a port, which exported the stone from the sixth century BCE, even continuing today. Known for its sulfury odor when freshly split, Prokonessian marble is medium- to coarse-grained, often with grayish banding. Roman records indicate it was on the lower end of the price hierarchy, but it was still popular for architecture and sarcophagi. The Church of Hagia Sophia in Istanbul (opened 537 CE) has considerable quantities of Prokonessian marble decorating its interior. The isotopic signature of Prokonessian assigned to the Museum’s Roman empress portrait is surprising since Prokonessian was not typically used for portraits, because of its banding. It is also unusual to find Prokonessian marble 1,500 miles from its place of origin, if the portrait’s

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alleged provenance of Tunisia is correct. Another valued, fine-grained white marble came from a quarry near the ancient city of Aphrodisias, today in southwest Turkey. Aphrodisias gained renown for its skilled sculptors, and their popularity continued into the Roman Empire. A number of Roman emperors were patrons of Aphrodisias, including Augustus (r. 27 BCE–14 CE) and Hadrian (r. 117–138 CE), who is thought to have gifted the city with a colossal bathhouse. He may have also brought Aphrodisian sculptors to Rome to work on various projects. After his death, a series of unusual portraits of the emperor were created, portraying him as young and rejuvenated (he was 62 and ill at the time of his death). The Museum's example is nearly identical to another from Tivoli, where the emperor had a private estate. Both of these portraits have been assigned isotopic signatures of Göktepe stone, a marble once used by Aphrodisian sculptors. In a 2020 publication,\*\* a group of scholars challenged the previous assignment of Göktepe to various sculptures, citing the close similarity of its isotopic signature to Carrara marble and the difficulty in accurately distinguishing the two. They have proposed improved analytical methods to differentiate the two more successfully. ■

\*By the second century CE, the *Ratio Marmorum*, Rome's "department of marble trade," had developed into an organization responsible for overseeing distribution of marble throughout the empire. About 20 stones were apparently under the RM's jurisdiction.

\*\**Journal of Archaeological Science* (113) January 2020.



**Portrait of an Empress** (Herennia Etruscilla?)  
Roman, ca. 250 CE  
Allegedly from Tunisia  
Prokonessian marble  
Weinberg Fund and Gilbreath-McLorn Museum Fund  
(2004.1)



**Portrait of the Emperor Hadrian**  
Roman, ca. 130–138 CE  
Göktepe marble  
Gilbreath-McLorn Museum Fund and Gift of Museum  
Associates (89.1)