

# Provenance

The statue was purchased at an estate sale in the Hudson Valley in the early 1990s by the owner, a philanthropist in the NYC area. Thus, there is no bona fide chain of ownership existing that links the statue to a specific time interval or area of origin.

The early provenance is not known to anyone. Convincingly, the sculpture and the lustrous marble it is carved from is now attributable to specific time and place of origin. Namely, around 2400 BC, of the Spedos variety of carved figurines, and named after the Early Cycladic burial site on the island of Naxos. The following research (accompanied by a battery of scientific tests conducted from 2016 to 2019) provides a sound basis for scholars and collectors alike to recognize this work of art as a particularly stunning and authentic piece created during the Aegean Bronze Age civilization in Greece, still remaining intact for posterity to view.

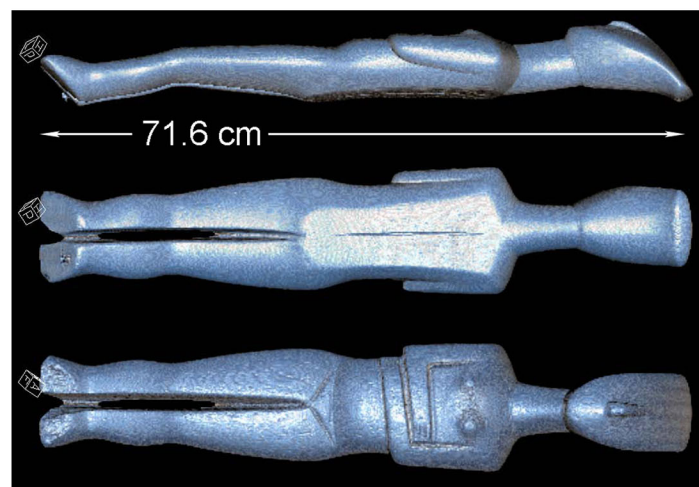
Identifying expert members of the scientific community was the first step to generate a true timeline by applying the most current scientific tools and methodologies that collectively demonstrated through scientific inquiry the connection of the statue with the Greek Cycladic islands at the time of its creation.

Tests involved CT scans, imaging, mineralogic and geologic studies and geochemical analyses, and lastly, of significant proof, chlorine-36 isotopic studies. Together the test data aids in establishing the link to the provenance and attribution of the statue. Technical details of this approach are reported below and in a companion report dated August 2019.

## New Scientific Approach

Integrated scientific studies have shown that the statue material consists of ultra pure foliated marble with a homogenous interior, thin natural patina with unique, consistent mineralogy indicating that it was not applied. The rock type is common in the Greek geologic belt, the chemistry is identical to marble samples from Naxos island and isotopic studies prove that the material is of great age (~4,400 years old). The conclusion that the statue is authentic is based on study of geology, mineralogy, geochemistry and isotopic analysis as described below.

CT scans of sculpture show a thin (0.3mm) but consistent weathering rind surrounding the statue suggesting homogeneous chemical weathering at or near the earth's surface over millenia.

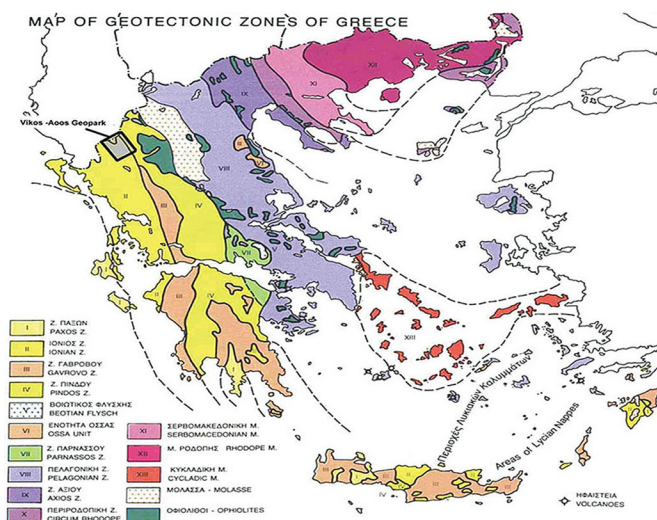


The radiographer measured the sculpture and provides the following dimensions:

- 71.6 cm length [29.8"]
- 14.1 cm width at shoulders [5.6"]
- 6.8 cm depth at breast [2.8"]
- 7.6 cm depth at nose [3.2"]

## Geology - Lithology

Marble of various types from the Greek Cyclades are well known throughout art and architecture. They have been mined for many centuries for purposes of building construction and art. These rocks are part of the Aegean Crystalline Belt of the Hellenides, a metamorphic suite from the Eocene age that underlies the islands (red map area).



The rocks consist of highly folded metamorphosed former shallow water marine strata that were drawn to great depths where transformation from pure limestone into pure marble took place. Uplift and erosion since formation brought these former deep-seated rocks to the Earth's surface where quarrying for construction and artistic use was undertaken by humans. Rocks of identical lithotype as the statue are well known from the Cyclades. Only the purest

marbles were used in religious statues as it was considered sacrilege to use anything other than the purest white marble mined.

The statue was crafted from a well-foliated highly sheared laminated metamorphic rock that consists of fine-textured very pure white calcite marble with aligned white mica (<1% muscovite and/or sericite) defining a foliation and lesser quartz in the meta-carbonate matrix. The pronounced planar metamorphic fabric could only have been produced by deep burial (at least 5-10 km) in the earth millions of years ago and within a zone of intense shearing associated with tectonic plate convergence. The statue marble is identical to descriptions of foliated, sheared marble from the Cycladean Hellenic Belt.

## Geochemistry

Laser element analysis of the statue interior and patina was conducted. The marble is extraordinarily pure from a chemical standpoint consisting of 99% calcite with 1% combined oxides of Mg, Si, Fe, and K.

The chemistry indicates an ultra-pure white calcite interior with very little dolomite (Ca, Mg carbonate) nor silicates - common phase in most non-pure marbles. By contrast, the warm pinkish patina contained calcite plus dolomite and fluorite which effectively eliminates the possibility that the patina is fake or applied. Samples from operating quarries on Naxos, Paros, and Thasos were analyzed for trace elements. Statistically significant trace-element variance similarities were found between the statue marble and the Naxos quarry samples. Thus, the geology, lithology and geochemistry all indicate that the statue material is linked to the geological underpinning of the Aegean region.

## Isotopic Age

Cosmic ray penetration within the upper few meters of the earth's surface produces cosmogenic nuclides. Calcium atoms in the marble convert to chlorine-36 at a known rate and exposure ages can therefore be calculated accurately. Testing at a leading research facility indicates an age of 4,400 +/- 1,800 years for the marble statue, **well within the Spedos age.**

This new scientific approach to authentication is the future. The analyses have confirmed that the statue is of appropriate age, physiography, carving style, lithology, mineralogic and chemical purity - and is an authentic ~4,400 year old statue of the Spedos Period.

# The Science of Cycladic Authentication

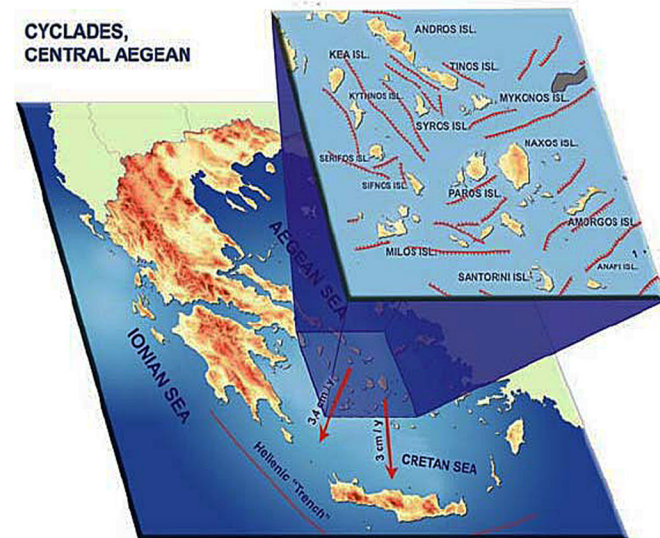




# Cycladic Civilization

Neolithic settlement on the Cycladic islands took place by the sixth millenia BC. These earliest settlers were accomplished sculptors in stone - providentially, some of their work has survived time.

Cycladic civilization was centered in the Aegean Sea region of Greece from roughly 3300 to 1000 BCE. Naxos, the largest Cycladic island and Paros were ideal sources for the finest and purest white marble in the world. This breath-taking female folded-arm figure carved from pure crystalline foliated white marble is typical of the stylized sculptures of the Cyclades of about 2500 BC.



## Spedos Variety (3,100–2,400 BCE)

Folded arm Cycladean female statues fall into three distinctive stylistic varieties:

Early Cycladic I (3,500-3,100 BCE)  
Early Cycladic II (3,100-2,400 BCE), and,  
Early Cycladic III (2,400-2,100 BCE)

Early Cycladic sculpture comprises predominantly female figures that range from simple modification of the stone to developed representation of human form, some with natural proportions and others more idealized. Many of these figures, especially those of the Spedos variety display a remarkable consistency in form and proportion that suggests they were planned with a compass for accuracy.

Archeologists have catalogued “folded arm figurines” from the region. They range from small hand-held figures to large statues of 1.5 m. Cycladic statues, when found intact are rare.

This statue is consistent with the **Spedos variety** (ECII) characterized by a slender elongated body with folded arms (in this instance right arm on top over left), a lyre-shaped head with conical nose, small pubic triangle and a deeply incised cut-through cleft between the legs. The breasts are depicted as slight protuberances. Details of the human form are reduced to a minimum, giving the figure a flat, angular geometric quality. The toes are missing.

Sculptors living on different islands produced these marble figurines in a similar style but with distinct variations. The recognition of different artistic personalities in Cycladic sculpture is based upon recurring systems of proportion and details of execution. Many statues have been found throughout the region in ancient structures.

