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Historic-artistic and archaeometric studies of the sculptures of the Museum of Ostia

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ABSTRACT. — An archaeometric study was conducted on 21 marble sculptures belonging to the collection of the Museum of Ostia. The sculptures consist of statues, reliefs, portraits, and architectural friezes from public buildings, private residences and funerary monuments. The study, aimed at determining the provenance of the marbles used, is based upon the measurement of the oxygen and carbon isotopic composition and the evaluation of the macroscopic features of the marble of the various items, corroborated by the historic-artistic information available. The results obtained indicate that the majority of sculptures are of Luni marble and were very likely crafted by local workshops. Parian and Thasian marbles, two of the finest Greek marbles, were also used; most artefacts made of Parian marble were imported, but the two sculptures of Thasian marble so far studied were probably carved by urban workshops. Relatively limited seem the use of marbles from Anatolia. Our data suggest that at Ostia the marbles from Luni (Carrara) and, to a lesser extent, Paros were the most widely used varieties; only few artefacts carved in marbles from other Classical sources have been found so far in the collection of the Museum. However, more data are needed to confirm this indication.

RIASSUNTO. — 21 sculture marmoree (statue, rilievi, ritratti, fregi architettonici) facenti parte della collezione del Museo di Ostia e provenienti da monumenti funerari, edifici pubblici ed abitazioni private, sono state sottoposte ad indagini archeometriche (misura della composizione isotopica dell'ossigeno e del carbonio, valutazione

dei caratteri macroscopici del marmo dei vari reperti) per stabilire la provenienza del marmo utilizzato e quindi tentare di stabilire se tali opere siano state importate o scolpite in officine locali. Nell'assegnazione della provenienza, si è tenuto anche conto delle conoscenze storico-artistiche disponibili per i vari reperti.

I risultati ottenuti indicano che la maggior parte delle opere è stata realizzata in marmo lunense, verosimilmente in botteghe locali. Minore, ma pur sempre rilevante, appare l'impiego di marmo pario; sono state infatti rinvenute varie opere, soprattutto di importazione, scolpite in questo marmo. Poco usate sembrano i marmi di altre classiche località estrattive della Grecia (Thasos) e dell'Anatolia (Afyon, Afrodizia). Queste indicazioni sono tuttavia da considerarsi solo preliminari; per una valutazione statistica dei vari marmi presenti nell'area archeologica di Ostia e Porto bisognerà attendere i risultati di uno studio sistematico dei reperti marmorei di quest'area, attualmente in via di completamento.

KEY WORDS: *marble; stable isotopes; Ostia.*

INTRODUCTION

The identification of the quarry sources of marble artifacts provides the archaeologists with fundamental information on the ancient workshops. In particular, such information helps to establish whether a marble sculpture was crafted by a local workshop, imported, or

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produced by itinerant artists. Taking also into account the cost of marble and craftsmanship, well documented in the literature, it is possible to reconstruct the social and economic features of the ancient world. It is firmly established that Ostia was the commercial neighbourhood of Rome; it was the port of entry of most of the merchandise necessary to the life of the *Urbs*. Such a role determined a particular relationship of this town with the *annona* (Food Provision Board) of Rome, as well as the composition of its ruling class, where freedmen were often present: this basically explains the building and ornamental sculptures policies. We are here dealing with a specific typology of munificence which affected both the building policies and the ornamental sculptures. At Ostia, the private interventions in these fields and those of the colonial government integrated the ones promoted by the central government either directly by the emperors or by important personages of the imperial court, such as, for instance, the *Praefectus Praetorii* Gavinus Maximus who was entrusted with the construction of the forum baths.

The present study is an attempt to establish by means of stable isotope analyses the sources of the marbles used for crafting a set of sculptures from the museum of Ostia coming from *i*) public buildings, *ii*) private residences, and *iii*) funerary monuments.

Among the public buildings, priority was given to the bath buildings, because they were public space *par excellence* privileged by decoration programs based upon sculptures designed for ornamental or architectural purposes. It is known that these programs are conveying ideological and celebrative messages expressed not only by the subjects of the sculptures but by the craftsmanship and marble quality as well.

As for the private residences, two groups of buildings were selected: *a*) the *domus* of imperial age (e.g. the *domus* of the Perseus) owned by the wealthy social classes, situated in peripheral areas far away from those inhabited by low-class people involved in commercial and harbour activities; *b*) the late Imperial

domus mainly located in the centre of the town to the south of *decumano* (*domus* of the Fortuna Annonaria, *domus* of the Protiro), in the western portion of the city near the river harbour (*domus* of Amore and Psiche), and along the coastline (*domus* of the Nymphaeum).

They were often rebuildings of older houses with the addition of *tablina*, courtyards and new rooms decorated with coloured marbles and sculptures (often reused statues of mythological subjects).

Among the sculptures from funerary monuments, some items from the tomb of Iulia Procula in the necropolis of the Isola Sacra were studied. The large number of sculptures found in this site, almost all inspired to Hellenistic groups, rises the problem of the original placement: ornament for the funerary precinct or warehouse of ancient marble statues? And, in the latter case, do they come from the necropolis or from the buildings of Porto?

According to their subject, the statues and reliefs selected for the present study may be subdivided into three groups:

- *opera nobilia*, (statues: OM 65, 70, 62, 71, 55, 61, 59, 67+68, 49+50, 69, 53, 54, 52, 58; reliefs: OM 60, 66);
- sculptures of a celebrative type (portraits: OM 72; pediment statues: OM51, OM64);
- architectural friezes (OM 56+57).

ANALYTICAL TECHNIQUES

The stable isotope analyses of the tiny amounts (1-2 mg) of marble carefully taken from the sculptures were performed by a FINNIGAN MAT 252 mass spectrometer equipped with a Kiel II automatic carbonate device. The results are expressed as δ - values in parts per thousand (per mil, ‰) relative to the PDB standard.

RESULTS AND DISCUSSION

The assignment of the provenance of the marbles of the sculptures listed above was

made on the basis of their isotopic signatures corroborated by a naked eye evaluation of the grain size; the available historical-artistic information for the various artefacts was also taken into account. Obviously, some assigned provenances are affected by a certain degree of uncertainty, that might be reduced by combining the isotopic analyses with some other analytical technique. Such approach, however, requires a quantity of material much larger than that available for the present study (1-2 mg). The $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ values of the marble samples were compared with the database developed by Gorgoni *et al.* (1998) for Classical Greek and Roman (Carrara) marbles (Figs. 1 and 2). The results of this study are discussed below, together with a brief description of the sampled sculptures.

Public Buildings

OM 65: Statue of Dionysos

Museum no. 112, from the Temple of Hercules (from a sewer).

White marble with medium-large crystals; max. height: 125 cm

Possible quarry sources (Fig. 2): Pa-2, Pa-4, Pr-1, Aph; assigned provenance: Pa-2

The sculpture, of praxitelean influence, portrays a young Dionysos: on his head a vine and ivy leaf crown, slightly falling to the right. His long hair is gathered on his nape and falls in two locks on his shoulders. 2nd century. A. D.

REFERENCES

CALZA and FLORIANI SQUARCIAPINO 1972, p. 9, n. 1; HELBIG IV, 2999; LIMC III, (1986) entry: «Dionysos», p. 433

OM 51: Head of a Nike (Tab. I a)

Museum no. 1234, from the Temple of Roma and Augustus.

White marble with small crystals; height, cm 31
Possible quarry sources (Fig. 1): C; assigned provenance: C

Part of this head, broken half way through its neck, had been sculpted and is the completion of the statue of a Nike from the pediment decoration of the Temple of Roma and Augustus built in the Forum in the first Julius - Claudian age (1st century A.D.)

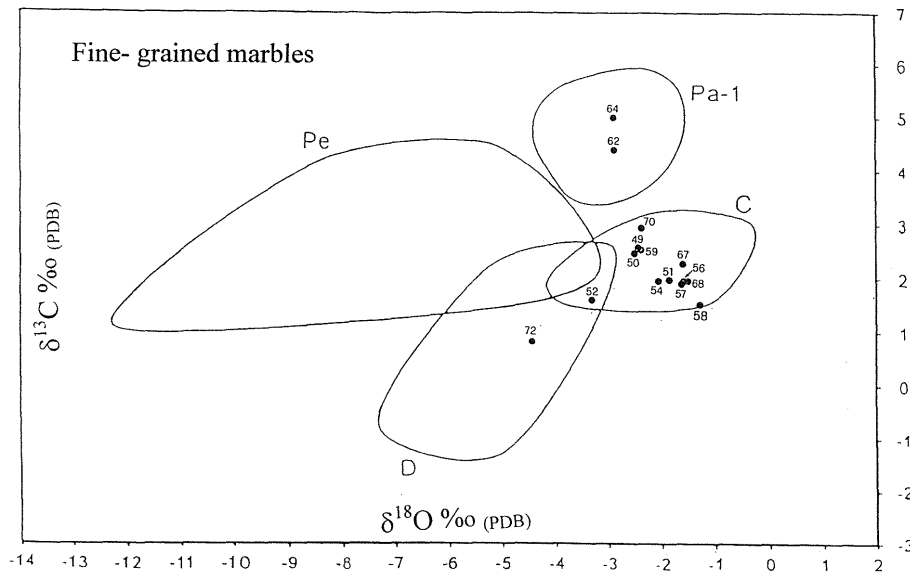


Fig. 1 – $\delta^{13}\text{C}$ vs. $\delta^{18}\text{O}$ signatures of the fine-grained marbles studied in this work, compared with the database of GORGONI *et al.* (1998). Pa-1: Paros, Stefani Valley quarries; C: Carrara; D: Docimium; Pe: Pentelikon.

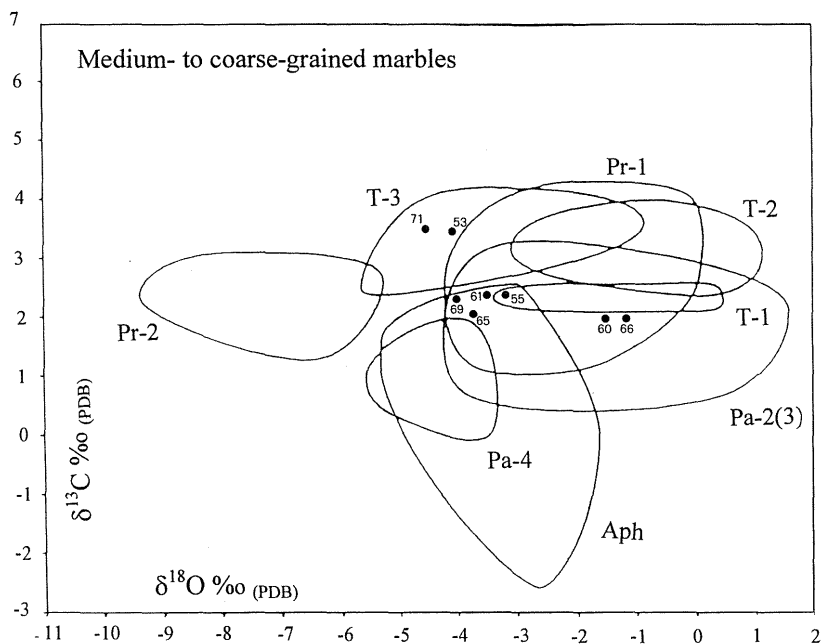


Fig. 2 – $\delta^{13}\text{C}$ vs. $\delta^{18}\text{O}$ signatures of the medium- to coarse grained studied in this work, compared with the database of GORGONI et al.(1998). *Aph*: Aphrodisias; *Pa-2(3)*: Paros, quarries from the Lefkes area and Aghias Minas Valley; *Pa-4*: Paros, Karavos quarry; *Pr-1*: Proconnesos, Saraylar and Kavala districts; *Pr-2*: Proconnesos, Camlik area; *T-1*: Thasos, Cape Phanari quarry; *T-2*: Thasos, Alikı quarries; *T-3*: Thasos. Cape Vathy-Saliara quarries.

REFERENCES

HÄNLEIN SCHÄFER 1985, p. 133; DUTHOY - FREL 1993, pp. 90-91, fig. 6,8

OM 64: Fragment of a lorica

Museum no. 10307, from the marble stacks in the Forum (Temple of Roma and Augustus ?).

White marble of medium -fine grain size; max. height 16 cm, max. width 24 cm.

Possible quarry source (Fig. 1): *Pa-1*; assigned provenance: *Pa-1* (lychnites)

This fragment is recognized as part of a lorica (cuirass); 1st century A.D.

OM 70: Statue of Artemis with *nebris* (fawn skin)

(Tab. I b) Museum no. 1107, from the College of the Augustales; 1st century A.D.

White, fine-grained marble; height 109 cm

Possible quarry sources (Fig. 1): C; assigned provenance: C.

Head, both arms, legs from knee down from this

sculpture and part of the fawn's snout are missing. It portrays Artemis as hunteress. The goddess is clad with a light chiton tied with two belts under her bosom and around her hips, and a *nebris* tied to her right shoulder covers the left side of her body. Its artistic style seems to be influenced by the Attic classicism from mid-hellenism, in particular by the production of Damophon from Messene. It is still under discussion whether it is a Roman replica of an original from about 200 B.C. or a classicistic work of Roman age, between the 1st and the 2nd century A.D. E. Simon is in favour of the second hypothesis and singled out a set of statues of Artemis referring to the Copenhagen-Ostia type. Its best replica would just be this very example. Its head would be in the Museo Borghese replica, which underlines the hunting aspect of the goddess with the presence of a dog at her feet.

REFERENCES

CALZA and FLORIANI 1941, pp. 241-245, figg. 17-18; CALZA and FLORIANI SQUARCIAPINO 1972, p. 35, n.1; HELBIG IV, 3027; LIMC II, entry: «Artemis/Diana» (E. SIMON), p. 802, n. 20a

TABLE I



a) Head of a Nike (OM 51); *b)* Statue of Artemis with nebris (OM 70); *c)* Statuette of a Priapus (OM 62); *d)* Portrait of the so-called Domitia Lucilla (OM 72).

OM 62: Statuette of a Priapus (Tab.I c)

Museum no.976, from the Forum Baths

White marble of medium-fine grain size; height, 85 cm

Possible quarry sources (Fig.1): Pa-1; assigned provenance: Pa-1 (lychnites).

Priapus is dressed in a long tunic with a cape tied on his right shoulder. Both garments are enlivened by deep folds underlining the forward slant of the statue. For its proportions and the stylistic characteristics the statuette can be the product of an insular workshop of the late hellenism.

REFERENCES

CALZA and FLORIANI SQUARCIAPINO 1972, pp. 39-40, n. 5; HELBIG IV, n. 3044

OM 57: Fragmentary relief with divinities

Museum no. 18853, from the Byzantine Baths; 2nd century A. D.

White, fine-grained marble; height 28.5 cm, width 14.5 cm; length 150 cm

Possible quarry sources (Fig.1): C; assigned provenance: C

REFERENCES

VELOCCIA-RINALDI, 1971, p. 15, tab. II,1; SCHEFOLD 1979, p. 99-103; HARRISON 1988, p. 101-107; SIMON 1990, p. 254-255, fig. 332a

OM 56: Fragmentary relief with Athena's birth (Tab. II a)

Museum no. 148, from the Forum Baths (re-used in a late wall); 2nd century A.D.

White, fine-grained marble; height 27.2cm; width 16 cm; length 72 cm.

Possible quarry sources (Fig. 1): C; assigned provenance: C

These two marble blocks, (OM 56, OM 57) re-used material discovered in two buildings in the vicinity of the forum of the city of Ostia, are completed by two other slabs now in the Staatliche Museum in Berlin. The frieze decorated with episodes from the myths of Athena and Ephaistos, has been believed pertinent to a small edifice for the cult of Ephaistos.

REFERENCES

BECATTI 1951, p. 1-14, figg. 1-3; CALZA and FLORIANI SQUARCIAPINO 1972, p. 42, n. 14; HELBIG IV, 3052; SCHEFOLD 1979, p. 99-103; HARRISON 1988, p. 101-107; SIMON 1990, p. 254-255, fig. 332a

OM 72: Portrait of the so called Domitia Lucilla (Tab. I d)

Museum no. 52, from the Forum Baths.

White marble, medium-small grain size, very translucent; height 33 cm

Possible quarry sources: D; assigned provenance: D.

The complex hairdo characterizing the portrait of this young lady is that adopted by Faustina Major, but remained fashionable until the second half of the third century A.D. Her eyes show heavy lips, her mouth is small and supple, whilst the contrast between her smooth complexion and hair left uneven, creates a delicate chiaroscuro unlike the exasperate one of the first antonine period. The likeness with some young portraits of Marcus Aurelius made some believe this is the emperor's mother, Domitia Lucilla whilst eventually some scholars recognised it as Marcus Aurelius' sister, Annia Cornificia Faustina (born 121 and died before 161 A.D.).

REFERENCES

CALZA 1964, n.148, table, 88; CALZA and FLORIANI SQUARCIAPINO 1972, p. 50-51, n. 9; HELBIG IV, n.3064; WEGNER and UNGER 1980, p. 107; FITTSCHEN and ZANKER III, p. 73, n. a1; SANDE 1985, pp. 242-244, fig. 40; CICERCHIA and MARINUCCI 1992, pp. 146-147, n. A2, fig. 73; VALERI 1998, p. 45, fig. 16

OM 71: Head of an athlete (Tab. II b)

Museum no. 93, from the Forum Baths

White marble with medium size, glittery crystals; height 30 cm

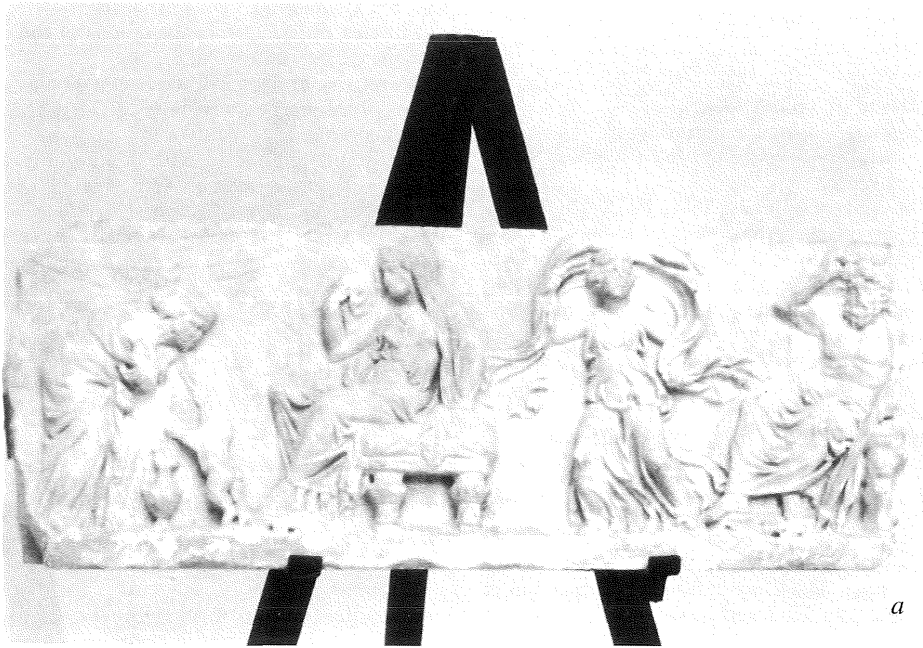
Possible quarry sources (Fig.2): Ta-3; assigned provenance: Ta-3

This head portraits a young victorious athlete with his head slightly inclined to the left and relative to a statue lightly larger than real. Particular is his cap with hair just hinted and the presence of a few holes with traces of the metal pins used to hold a bronze crown. The youth's face with a cubic structure, is clearly hinting at the typical traits of Miro's art, but can be also recognized true-like features such as a low eyebrow line, asymmetrical eyes, a rather wide mouth, and a protruding nose. It is then, probably the classicistic work of a workshop active in the 1st century A.D., strongly influenced by the neo-attic school.

REFERENCES

RICCI 1938, p. 560-561, fig. 5-6; CALZA and FLORIANI SQUARCIAPINO 1972, p. 39, n. 3; HELBIG

TABLE II



a) Fragmentary relief with Athena's birth (OM 56); b) Head of an athlete (OM 71); c) Head of a Satyr (OM 55).

IV, n. 3042; MANDERSCHIED 1981, p. 77, n. 82, tav. 19; RAUSA 1994, p. 166, note 70; HERRMANN and NEWMAN 1995, p. 76, fig. 3; VALERI 1998, p. 43-44, fig. 15

OM 55: Head of a Satyr (Tab. II c)

Museum no.97, from the Forum Baths.

White, slightly bluish marble of medium grain size; height 25 cm.

Possible quarry sources: Pr-1, Pa-2, T-1, Aph.; assigned provenance: Aph ? Pr-1 ?

This head, slightly inclined to the right, reproduces the features of a smiling Satyr with spiky ears, strong cheekbones and a roundish chin, while its thick lips bloom into a smile which lets its teeth glimpse. Its bulging eyes are characterized by pupils marked with an incision. Its hair, ornated by a pine crown is rendered with plastic, tousled locks divided into three tufts: one central with a small horn at either side and two lateral on its temple. This statue can be set along with the large number of portraits of ferine creatures from the Roman era inspired to the sculptures of the hellenistic art from Asia Minor and was probably related to a statue of the «Satyr inviting to dance» type. The closest stylistic comparison is with the head of a Satyr with *Kroupezion* now kept at Palazzo Corsini from the Villa of the Quintili along the Appian way. The drill work separating the various locks, the contrast between the smoothness of its face and the unevenness of its hair, and finally the clear incision of the pupils do point to a date around the 2nd century A.D.

REFERENCES

CALZA and FLORIANI SQUARCIAPINO 1972, p. 38, n. 14; HELBIG IV, n. 3040; MANDERSCHIED 1981, p. 77, n. 75; CICERCHIA and MARINUCCI 1992, p. 149, n. A9; VALERI 1998, pp.42-43, fig. 14

OM 61: Female statuette of a Tyche (Tab. III a)

Museum no. 974, from the Forum Baths; 1st century A.D.

White marble with medium grains; height 71 cm.

Possible quarry sources (Fig.2): Aph, Pa-2, Pr-1; assigned provenance: Pa-2.

This figure is standing on its left leg and its right leg slightly forward and portraits a Tyche of an archaic style.

REFERENCES

CALZA and FLORIANI SQUARCIAPINO 1972, p. 39, n. 4; HELBIG IV, n. 3043; MANDERSCHIED 1981, p. 77, n. 77; CICERCHIA and MARINUCCI 1992, p. 150-151, n. A14, fig. 79

Private Residences

OM 59: Crouching Venus (Tab. III b)

Museum no. 123, from the domus of the Fortuna Annonaria; 2nd century A.D.

White, fine grained marble; height 42 cm

Possible quarry sources (Fig. 1): C; assigned provenance: C.

The statuette follows with some variations the iconography of the famous Aphrodites of Doidalsas, sculpted by the Bythinian artist in the 3rd century B.C. and taken as a model for real size, or smaller statues ornating the houses and the gardens of the imperial age.

REFERENCES

CALZA and FLORIANI SQUARCIAPINO 1972, pp. 41-42, n. 13; HELBIG IV, n. 3051

OM 67 - OM 68: Statue of Artemis (Tab. III c)

Museum no. 84; from the domus of the Fortuna Annonaria OM 67: upper part, white, fine-grained marble; height 62 cm (head included).

1st century B.C.

Possible quarry sources (Fig.1): C; assigned provenance: C. OM 68: lower part, white marble with small slightly bluish crystals; height 93 cm. 2nd century A.D.

Possible quarry sources (Fig.1): C; assigned provenance: C.

This sculpture is the result of an ancient restoration work. As one can infer from the stand in the shape of a tree trunk on which a nebris (fawnskin) is leaning and from the presence of a dog on the right, the lower section of a statue of Artemis has been added to the bust of a young girl with her hair gathered in the «melonfrisur – melon hair-do» and dressed in a light chiton leaving her right shoulder naked.

REFERENCES

CALZA-FLORIANI SQUARCIAPINO 1972, p. 36, n. 5; HELBIG IV, 3031; LINDNER 1982, 359-361, fig. 39; LIMC II, s.v. «Artemis/Diana» (E. Simon), p. 803, n. 21a; VORSTER 1998, pp. 286-288, fig. 7

OM 49 - OM 50: Group of Amore and Psyche (Tab. III d)

Museum no.180, from the domus of Amore e Psyche

White marble of fine grain size; height (with base) 80 cm, without base 71 cm OM49 (Psyche); Possible quarry sources (Fig.1): C; assigned provenance: C

TABLE III



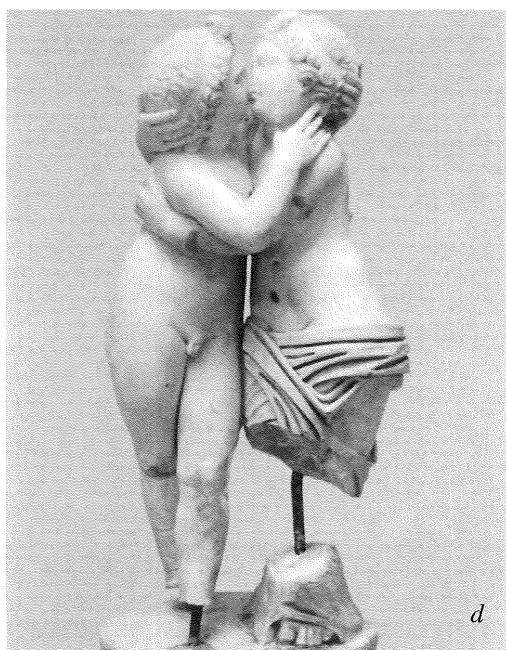
a



b



c



d

a) Female statuette of a Thyche (OM 61); *b*) Couching Venus (OM 59); *c*) Statue of Artemis (OM 67 –OM 68); *d*) group of Amore and Psyche (OM 49 - OM 50).

OM50 (Amore); Possible quarry sources (Fig.1): C; assigned provenance: C

This sculpture could belong to a series of replicas of probable hellenistic production. The interest of this piece from Ostia lies in the style characteristic of the late antiquity sculpture: wide and flat hands, the rigid drapery and the static, manneristic hairdoes. The sculptor's ability is concentrated on the rendering of the heads, the very smooth surface of the soft faces is framed by their puffed up locks. Clear is the decorative aim enlivening our piece belonging to one of the most significant houses at Ostia, from the late antiquity.

Beginning of the 4th century A.D.

REFERENCES

CALZA and FLORIANI SQUARCIAPINO 1972, p. 42-43, n. 17; HELBIG IV, n. 3054; LIMC VII s.v. «Psyche» (N. ICARD GIANOLIO), p. 580, n. 141b

OM 69: Statue of Artemis (Tab. IVa) Museum no. 4, from the domus of the Protiro White to slightly bluish marble of medium grain size; maximum height 139 cm, maximum height without base 132 cm

Possible quarry sources (Fig. 2): Pr-1, Pa-2, Aph; assigned provenance: Pa-2

Artemis is dressed in a short richly draped chiton, while a cape falling from her shoulder is rolled around her waist as a belt. The goddess is portrayed at the moment of extracting an arrow from the quiver and probably her left hand would have held a bow. A dog is standing beside her. This iconographic scheme, already known at the middle of the 4th century B.C. and variously modified in the hellenistic age, enjoyed some favour in the Roman times as it is demonstrated by the large number of replicas mainly produced in the 2nd century A.D.; Antonine age (138-161 A.D.)

REFERENCES

CALZA and FLORIANI SQUARCIAPINO 1972, p. 37, n. 9; HELBIG IV, n. 3035; BOERSMA 1985, p. 284-287, n. 2, fig. 283-286

OM 53: Statue of Perseus (Tab. IVb) Museum no. 99, from the baths of the *domus* near the Gate of Laurentum.

White marble with glittering medium size crystals; maximum height 161 cm

Possible quarry sources (Fig. 2): T-3; assigned provenance: T-3.

Perseus dressed only in a *clamis* wrapped around his shoulders, holds the head of Medusa with his right hand whilst he probably held a sword in his left hand. This sculpture is inspired to the sculpture from the first hellenism but exact replicas of this type are unknown and it has therefore been considered as a classicistic work of the Roman age.

1st - 2nd century A.D.

REFERENCES

CALZA and FLORIANI SQUARCIAPINO 1972, p. 41, n. 9; HELBIG IV, n. 3047; ZANKER 1974, p. 106, n. 9, tabs. 79,1,3-5; 82, 4

Necropolis

OM 54: Head of a barbarian (?) (Tab. IV c) Museum no. 95, from the necropolis on the Isola Sacra White, fine grained marble; height 27 cm

Possible quarry sources: C, Pa-2, Pr-1; assigned provenance: C

This young man has been understood as a barbarian on account of his hair style with long and tousled locks and a certain stylistic resemblance with the Ludovisi Gauls, replicas of the bronze gift statues made in Pargamon on the occasion of the Attalids' victories on the Galats.

End of 1st, beginning of 2nd century A.D.

REFERENCES

CALZA and FLORIANI SQUARCIAPINO 1972, p. 37, n. 8; CALZA 1940, pp. 235-236, figs. 133-134; HELBIG IV, n. 3033.

OM 52: Group with Erotes on a sea lioness (Tab. V a)

Museum no. 1111, from the necropolis on the Isola Sacra, tomb of Iulia Procula; A fountain ornament (?)

Marble of medium-small grain size; maximum height 64 cm, maximum width 74 cm

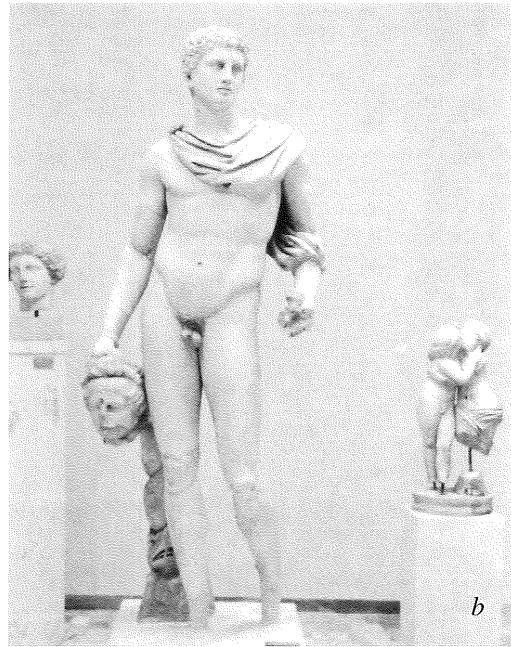
Possible quarry sources (Fig.1): C, D; assigned provenance: D

A sea lioness with a long twisted tail is swimming among the waves and is carrying on its back a little «putto» with crossed legs and his right arm forward. The group is inspired to hellenistic works and probably decorated a fountain. 2nd century A.D.

REFERENCES

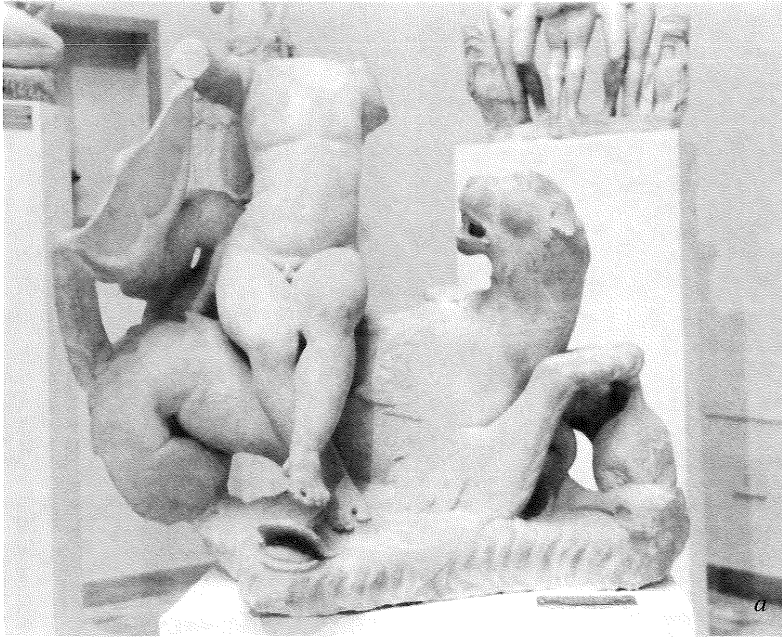
CALZA 1940, p. 246, fig. 146

TABLE IV



a) Statue of Artemis (OM 69); b) Statue of Perseus (OM 53); c) Head of a barbarian (OM 54).

TABLE V



a) Group with Eros and a sea lioness (OM 52); *b*) Relief of a Silenus in act of sacrificing (OM 60).

OM 58: Group with Pan removing a thorn from a Satyr

Museum no. 35, from the necropolis on the Isola Sacra, tomb of Iulia Procula

White, fine grained marble; height 62 cm; maximum width 53, base depth 20 cm.

Possible quarry sources (Fig.1): C; assigned provenance: C

The group reproduces with variations a creation of the late rhodian hellenism called «thorn removing (cavaspina)». A little Pan is removing a thorn from a young satyr sitting on a rock, with a pine cone garland on his head and a *nebris* (fawnskin) tied on his chest.

2nd century A.D.

REFERENCES

CALZA 1940, pp.238-241, fig. 137; CALZA and FLORIANI SQUARCIAPINO 1972, p. 38, n. 12; HELBIG IV, n. 3038

OM 60: Relief of a Silenus in act of sacrificing (Tab. V b)

Museum no. 141; from via della Foce.

White marble, medium grain size; maximum height 32 cm, maximum width 34 cm, depth 3 cm.

Possible quarry sources (Fig. 2): Pa-2, Pr-1; assigned provenance: Pa-2

A bearded Silen, crowned by vine leaves and wrapped in a large cape is making a sacrifice. He is holding a branch with berries with his left hand and with his right hand he is pouring the content of a *kantharos* onto an altar full of fruit and from which a snake is creeping down.

1st century B.C. – 1st century A.D.

REFERENCES

CALZA and FLORIANI SQUARCIAPINO 1972, p. 41, n. 12

OM 66: Greek Relief Museum no. 1102, from *via della Foce*. This fragmentary relief represents part of a female figure sitting on a chair and holding an *alabastron* with her left hand. Beside her there must have been a second standing female figure with a bird at her feet. 5th B.C.

White marble, slightly bluish; medium grain size. Maximum height 40 cm, maximum width 47 cm

Possible quarry sources (Fig.2): Pa-2, Pr-1; assigned provenance: Pa-2

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CALZA and FLORIANI SQUARCIAPINO 1972, pp. 30-31, n.5

CONCLUDING REMARKS

The results of the present study indicate that the Carara marble is by far the most widely used; a quite large use was also done of the Parian marbles from both the Lefkes and Stephani quarries (Paros-2 and Paros-1, respectively). Also used, though to a much lesser extent, were the marbles from Afyon (docimium) and Thasos (see Fig. 3). However, *more* archaeometric and archaeological investigations carried out on the sculptures from the Museum of Ostia so far studied (this work and LAZZARINI *et al.*, 1995) do not allow yet to establish, on statistical grounds, which varieties of marble were most used by the ancient artists. Reliable statistical information can be only achieved taking into account all of the sculptures found in Ostia and Porto, a project which will be hopefully completed in the next few years. However, some conclusion can be drawn from the data so far available

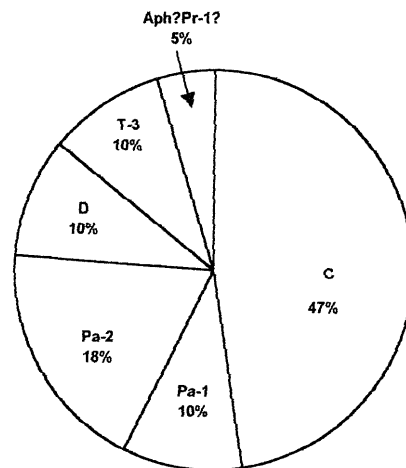


Fig. 3 – Pie-diagram showing the % abundances of the various marbles used for the studied sculptures. Symbols as in fig. 1 and 2

(Fig. 3). It is in fact evident that the Carrara (Luni) marble is by far the most widely used. For example, this marble was used in the pediment sculptures (sample OM 51) of the Temple of Roma and Augustus, the most important cult place of the first imperial age, built in the framework of the imperial building policy with the contribution of craftsmen trained in the City. Carrara marble was also used by local workshops, as witnessed by samples OM 56/57 (an architectural frieze with scenes of the myth of Vulcan and Athena) and 58 (group with Pan removing a thorn from a Satyr); some of such workshops were adopting Hellenistic models (e.g. the statue of Artemis with the fawn skin, sample OM 70) or reflected Asia Minor styles (e.g. the barbarian head, sample OM 54). It is worth noting that the use of Carrara marble excludes that these two items were imported from Greece or Anatolia.

The data presented in this work and in LAZZARINI *et al.* (1995) suggest that the marbles from the island of Paros were also widely used. Sculptures carved in Parian marble from the Chorodaki Valley quarries (Pa-2 in Fig 2) are the portrait- statue of C. Cartilius Poplicola (LAZZARINI *et al.*, 1995), imported in Republican time, the statue of Artemis from the *domus* del Protiro (OM 69), the statuette of Tyche (OM 61), the statue of Dionysos (OM 65), the relief with a sacrificing Sylenus (OM 60) and the so-called Greek Relief (OM 66). The Parian marble from the Stefani Valley quarries, also known as «lychnites», one of the finest Greek marbles, was used for the Priapus' statuette (OM 62), probably imported from Athens or from the islands of Rhodes and Delos, the fragment of a *lorica* (OM 64) and the Asclepius' torso, probably from an Attic workshop (LAZZARINI *et al.*, 1995). Another high-quality Greek marble, the Thasian marble, was used for the head of athlete (OM 71) and the statue of Perseus (OM 53); these artefacts were probably carved by urban workshops.

Relatively limited seems the use of the marbles from Anatolia; only few artefacts carved in such marbles in fact have been found

so far in the collection of the Museum. Among these, the statue of Eros bending the bow (inventory 139, LAZZARINI *et al.*, 1995), in Aphrodisian marble, the group of Eroti on a sea lioness (OM 52) and the so-called portrait of Domitia Lucilla (OM 72), both in Docimium marble. The portrait is attributed to a Greek-Oriental workshop active in Rome at the service of imperial patrons.

In conclusion, our data suggest that, as far as the collection of the Museum is concerned, the most widely used marbles were from Carrara and Paros; artifacts crafted in marbles from other Classical sources are less numerous. However, more data are needed to confirm this indication.

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