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SCULPTURAL MARBLES FROM COSA (TUSCANY, ITALY) AND THEIR PROVENANCE BY EPR AND PETROGRAPHY

JACQUELYN COLLINS-CLINTON* · DONATO ATTANASIO**

ROSARIO PLATANIA***

ABSTRACT

The marble provenance of 24 sculptural artefacts, sampled in the Antiquarium of Cosa, has been established by a multimethod approach using EPR and petrographic/morphological information and a database including 10 quarrying sites considered to be possible marble sources. Seven questionable provenances were verified by independent isotopic provenancing, which resulted in the re-assignment of two samples. The overall result is that the use of Carrara marbles at Cosa, although widespread as expected, is not universal. Several other varieties, including 6 Pentelic, 5 Parian and 1 dolomitic Thasian marbles were detected and account for almost half of the total sampled artefacts. Most notable is the presence of the highly prized Parian lychnites used to carve a male torso and a draped female sculpture, both life-sized, or the use of Thasian dolomite for another male torso. The implications of these findings are briefly discussed.

KEYWORDS: Sculptural marbles, Cosa, provenance, EPR, petrography.

1. INTRODUCTION [J. C.-C.]¹

IN December 2003 and January 2004 Donato Attanasio took samples from a selection of white marble sculptures and furniture in the Antiquarium at the Roman town of Cosa, located on the Tuscan coast of Italy halfway between Rome and Florence and excavated under the aegis of the American Academy in Rome. Founded in 273 BC as a Latin colony soon after the nearby Etruscan city of Vulci fell to the Romans, Cosa is best known as a paradigm of Roman Republican town planning superimposed on undulant terrain within imposing 3rd century BC walls fortified with towers – very Hellenistic in spirit (FIG. 1). Religious and civic building in permanent form did not get underway until the following century, and it was in the decades before and after 100 BC that Cosa reached the peak of her prosperity. The economic base for this was the export of wine and possibly also garum from the excellent

port and fishery at the foot of the hill to the southeast. Around 70 BC the city was attacked and sacked by unknown forces, very possibly the pirates known to have been raiding the Tyrrhenian coast of Italy before Pompey vanquished them in 67 BC; evidence of burning and abandonment of the town attests to this. Under Augustus and the Julio-Claudians, Cosa enjoyed a brief *renovatio* that lasted through most of the 1st century AD, and, although this is the period to which much of the marble sculpture and furniture belongs, I would like to explore here the probability that several pieces embellished the late Republican homes of Cosa's wealthier citizens, based upon the results of the marble analysis.²

Two parts of town have yielded most of the sculptural material: the *arx* and the *forum*. The *arx* with its *Capitolium* was the *locus* for many imperial dedications, mostly portrait statuary. The *forum*, multifunctional in nature, has yielded statuary as well as furniture,

* Address for correspondence: J. Collins-Clinton [J. C.-C.], Department of Classics, Cornell University, Ithaca (NY) 14853 (USA). E-mail: jcc31@cornell.edu ** D. Attanasio [D. A.], ISM-CNR, P.O. BOX, 1 00016, Monterotondo Stazione, Roma (Italy). E-mail: donato.attanasio@ism.cnr.it *** R. Platania [R. P.], IMIP-CNR, P.O. BOX, 1 00016, Monterotondo Stazione, Roma (Italy). E-mail: rosario.platania@imip.cnr.it

¹ I would like to thank Lawrence Richardson Jr. for his advice and comments upon an earlier version of this paper. All remaining errors are my own. ² See most recently FENTRESS 2003, with further bibliography.



FIG. 1. Cosa, town plan (excavation photo courtesy American Academy in Rome).

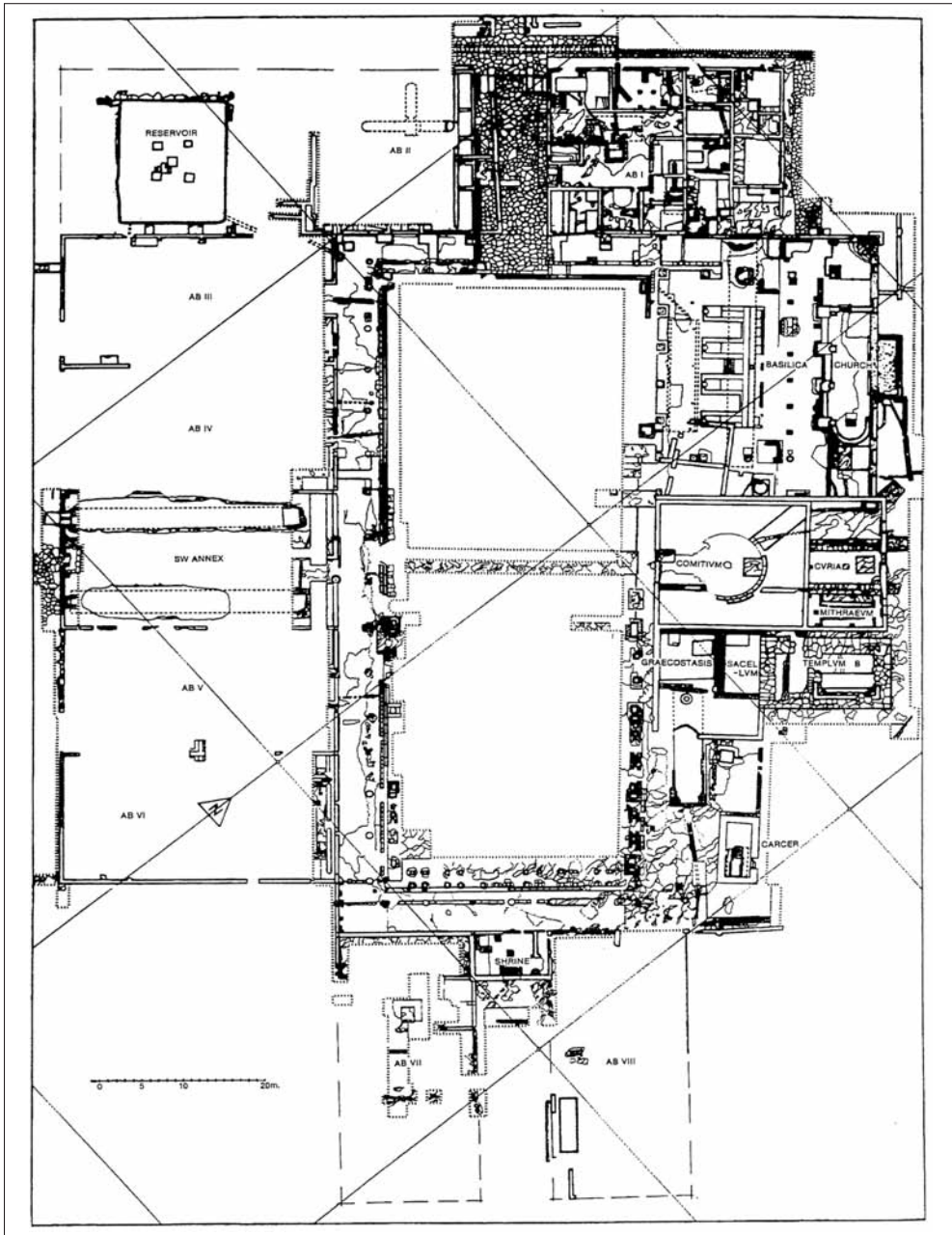


FIG. 2. Cosa, *forum* plan (excavation photo courtesy American Academy in Rome).

belonging to both public and private spheres.¹ The plan shows the location of public buildings lining the eastern side: *basilica*,

comitium/curia complex, a single-cella temple, and a *carcer* (FIG. 2). For contextual purposes several points concerning the *forum*

¹ Material excavated before 1969 appears in COLLINS 1970.

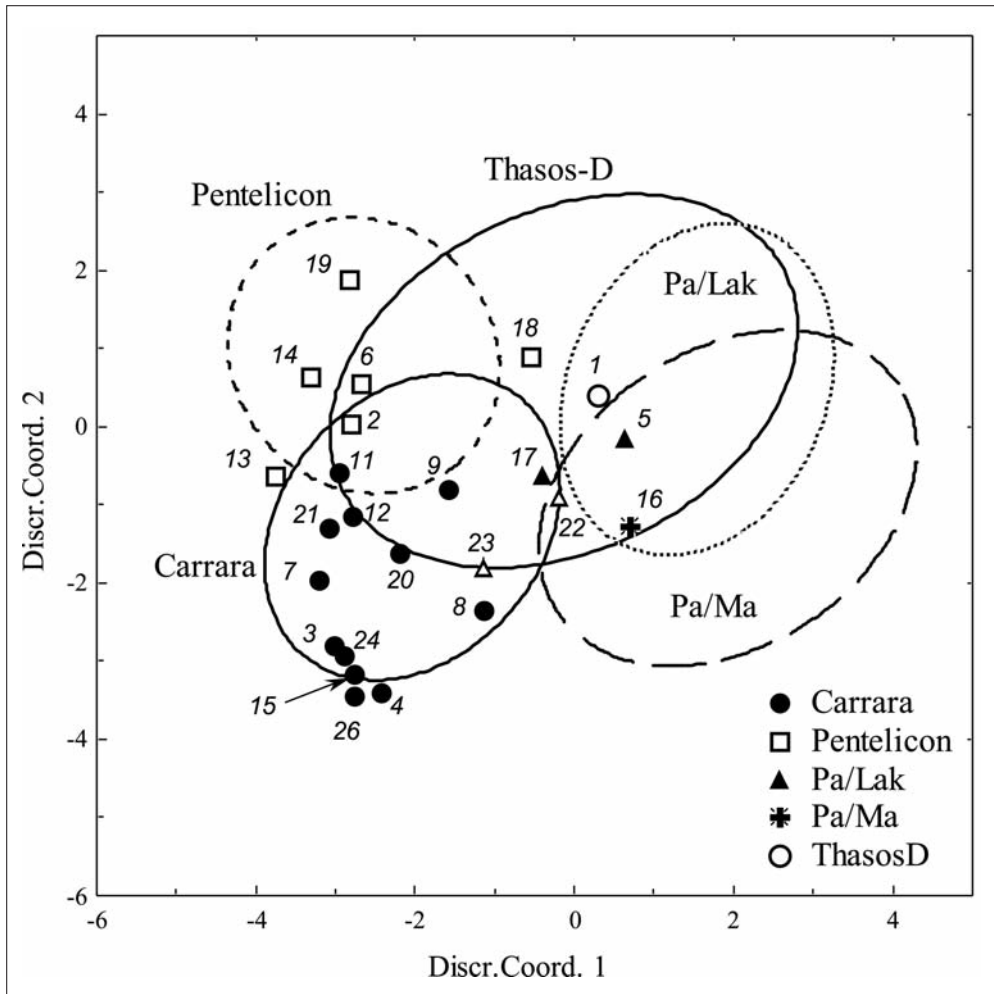


FIG. 4. Simplified discriminant plot including only relevant source fields (90% probability ellipses) and location of the experimental data points. The coordinates are linear combinations of the original variables. The final provenance of samples CO22 and CO23 (open triangles) has been established with the support of isotopic data and multi-method approach.

are noteworthy. One is the unusual placement of atrium houses along three sides for Cosa's elite families; these were constructed in the 2nd century BC and must account for the quantity of domestic sculpture and furniture found in the *forum*.¹ One of these, the House of Diana on the western side, has been completely excavated (in Figure 2, labelled AB V).² The second is the small *odeum*

built into the remains of the *basilica* after it collapsed in an earthquake of AD 51.³ Last, a shrine of Liber Pater, the Roman Bacchus, was built in late antiquity and outfitted with reused sculptures.⁴

The 24 pieces chosen for testing include all the large-scale portrait statues and a selection of heads and body parts, domestic sculptures, decorative herms, and pieces of furniture.

¹ FENTRESS 2000 and EADEM 2003.

³ COLLINS-CLINTON 2000.

² EADEM 2003, especially 191-223; also 14-26, 32-55, 61-62.

⁴ EADEM 1977 and 1997, abstract.

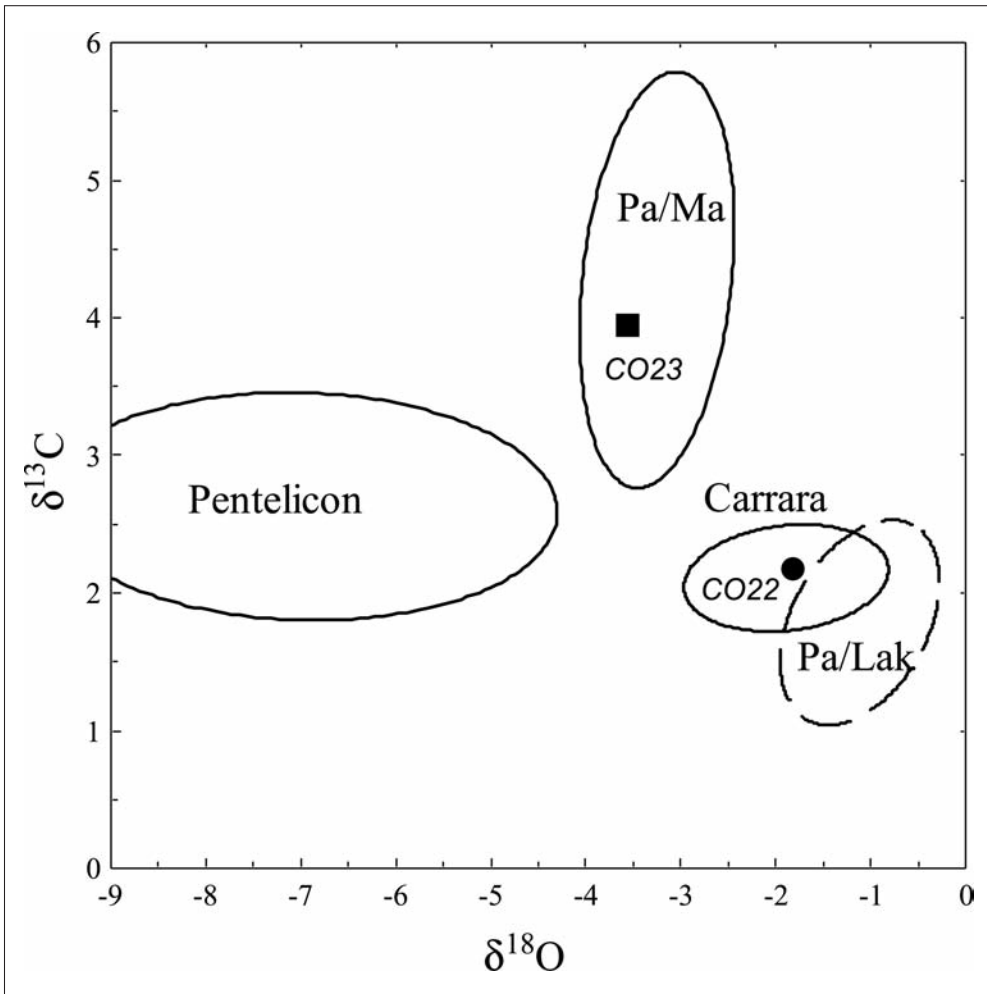


FIG. 5. Simplified isotopic plot showing the location of samples CO22 and CO23 with respect to the relevant provenance quarries.

These provide a cross-section of the types and uses of the sculptures from Cosa. Discussed in the scientific section below, they fall into five marble groups: Carrara (12 pieces), Pentelic (6), Paros/Lakkoi (3), Paros/Marathi (2), and, most surprisingly, Thasos dolomite (1). Figure 4 shows the *EPR*/petrographic assignments and Figure 6 the percentages from each quarry. I will not repeat conclusions derived from scientific analysis given below,

except to note the uncertainty surrounding the quarry provenance of one piece, number 22 in Figures 4 and 5, which could be either Carrara or Paros/Lakkoi. Proconnesian marble from the Island of Marmara in Turkey has not been found at Cosa among the sculptural material.¹

A caveat about the high percentage of Greek marbles in the sample noted by D. Attanasio below, is in order, because a 50%

¹ This is not surprising given the early date of the Cosa marbles relative to the importation of Proconnesian marble to Italy. Although this marble has been found in Pompeii, it is very rare; the contexts postdate the earthquake of AD 62, and it was not used for sculpture. On this see most recently FANT 2002, especially 313-314.

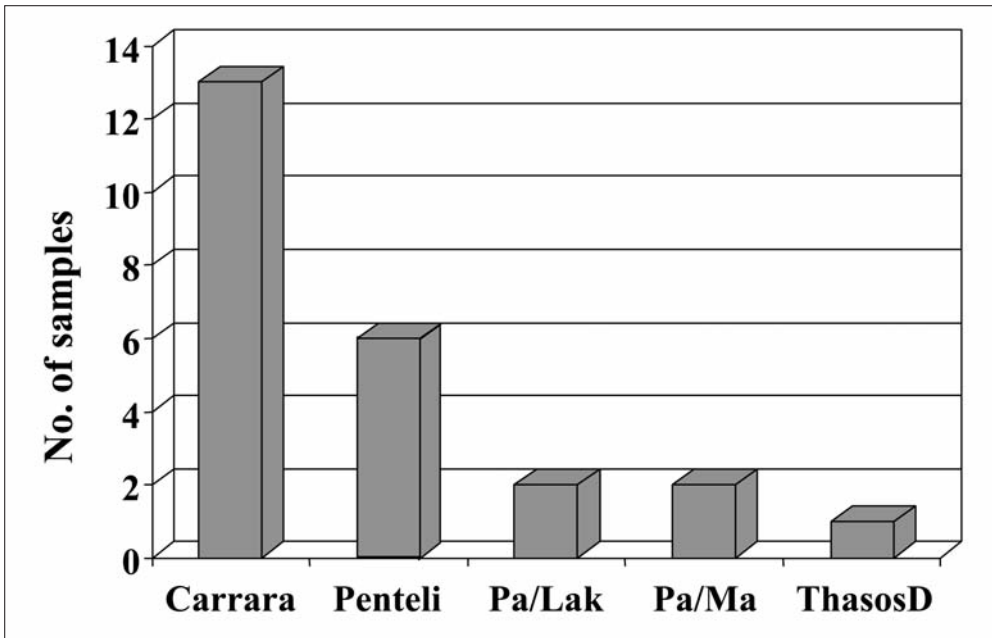


FIG. 6. Histogram of provenance distribution for the 24 artefacts sampled at Cosa.

usage of imported Greek marble seems high. All the large pieces were selected for their obvious importance, and pieces that seemed non-Italian on visual examination were chosen for determining their provenances with greater accuracy. Thus the examples were skewed in favor of the non-Italian marbles.

2. EXPERIMENTAL [D. A.]

2. 1. *The Cosa Samples*

Among the many sculptures and sculptural fragments in the Antiquarium and its store-rooms at Cosa, 24 were selected for sampling and are presented here. A complete list appears in Table 1 together with inventory numbers or brief descriptions for the purpose of identification. Table 1 also gives the experimental values of the spectroscopic and petrographic variables used for discrimination and discussed below.

The samples were small chips weighing a few hundred mg. Before grinding or polishing, as required to carry out the experimental measurements, external traces of weathering, black crusts or patinas were carefully removed mechanically.

2. 2. *The Database of Quarry Samples*

The determination of provenance of unidentified marble samples is usually carried out by measuring a set of properly selected physico-chemical properties and comparing their numerical values with the results available in a database of quarry samples from viable source sites. The comparison can be carried out at various levels of sophistication, from simple graphical presentation of the raw data to full multivariate statistical data processing. Art-historical information plays a crucial role in the process in that it allows pre-selection of the most likely provenance sites, thus reducing the complexity of the classification problem, which, otherwise, would be difficult or impossible to solve.

This approach is the result of several decades of research with contributions from many different groups. Several techniques have been developed or tested for the purpose of marble provenancing; the most successful and widespread are thin section petrography (MOORHOUSE 1959), the measurement of carbon and oxygen stable iso-

SAMPLE	LOCATION	DESCRIPTION AND INVENTORY	INTENSITY	INTEGRAL	LINEWIDTH	DOLOMITE (%)	MGS (MM)	COLOUR	¹⁸ O	¹³ C
CO1	Storeroom	Male torso, CD975	0.542	0.208	0.733	100	1.8	235		
CO2		Female foot, CC887/213299	1.154	0.508	0.573	0.0	0.8	233		
CO3		Male foot + leg, CG238+C67.250	0.373	0.317	0.648	0.0	0.5	240	-1.62	2.31
CO4		Male foot + leg, CE15+CD188/213289	0.205	0.209	0.613	0.0	0.5	233	-1.70	2.18
CO5		Male torso, CE208	0.149	0.179	0.471	0.0	1.6	241		
CO6		Female head, C73.11/213300	1.557	0.792	0.602	0.0	0.9	232		
CO7		Draped female legs, C67.589	0.622	0.329	0.584	0.0	0.5	215		
CO8		Draped female torso, CD976	0.309	0.201	0.652	0.0	0.7	192		
CO9		Table leg fragment, CC11	0.540	0.328	0.614	0.0	0.9	224		
CO11		Diana, C9603	1.405	0.505	0.684	0.0	0.7	220		
CO12		Herm, C9617	0.624	0.294	0.604	0.0	0.7	248		
CO13		Herm, C9618	1.273	0.590	0.593	0.0	0.6	240		
CO14		Lion head, CE952	2.475	0.942	0.642	0.0	0.8	228		
CO15		Museum Great Hall	Male loricate torso, CC549/101245	0.316	0.313	0.685	0.0	0.5	237	-1.65
CO16	Male torso, CC548/101246		0.093	0.148	0.471	0.0	1.3	228		
CO17	Male torso, CA8/101244		0.204	0.107	0.491	0.0	1.2	240		
CO18	Basin support, C75.1		0.628	0.342	0.522	0.0	1.4	216		
CO19	Museum Small Hall	Pan, CE1953/100113	7.207	2.740	0.767	0.0	1	190	-7.63	2.67
CO20		Dionysus C68.25A/101277A	0.431	0.278	0.603	0.0	0.7	232		
CO21		Relief panel, C68.118	0.748	0.391	0.594	0.0	0.6	228		
CO22		Herm, C68.10/100729	0.225	0.196	0.561	0.0	1.2	230	-1.83	2.18
CO23	Outside Museum	Draped female, CD611	0.133	0.154	0.440	0.0	0.8	236	-3.57	3.95
CO24		Female head, C67.284	0.314	0.201	0.623	0.0	0.5	238		
CO26		Togatus, CD610	0.332	0.208	0.767	0.0	0.5	240	-1.73	2.24

TABLE 1. List of the 24 sculptural marbles sampled at the Antiquarium of Cosa, with the experimental values of the physico-chemical variables used for marble provenancing.

topes ratios (HERZ 1985, GORGONI *et alii* 2002), trace element analysis (MATTHEWS 1997), electron paramagnetic spectroscopy (ATTANASIO 1999, POLYKRETI *et alii* 2002), and others. It is now clearly established that single techniques are hardly satisfactory, the best results being obtained by multivariate approaches combining two or more different methodologies (MOENS *et alii* 1988, MATTHEWS *et alii* 1995, ATTANASIO *et alii* 2002). We should add, however, that effective use of the published databases is greatly hampered by the fact that in most cases detailed experimental data have not been reported.

Within this context we have been developing and publishing a new marble database based on the spectroscopic and petrographic information discussed in the next section and including, at present, 1,275 samples from 17 historically relevant quarrying sites in the Mediterranean basin (ATTANASIO 2003). On the basis of existing information, however, provenancing of the Cosa marbles was carried out taking into account a subset of the general database including only the eight most likely source sites and 884 total samples according to the following list:

Afyon (65); Carrara (170); Hymettus (42); Naxos (40); Paros/Lakkoi (63); Paros/Ma-

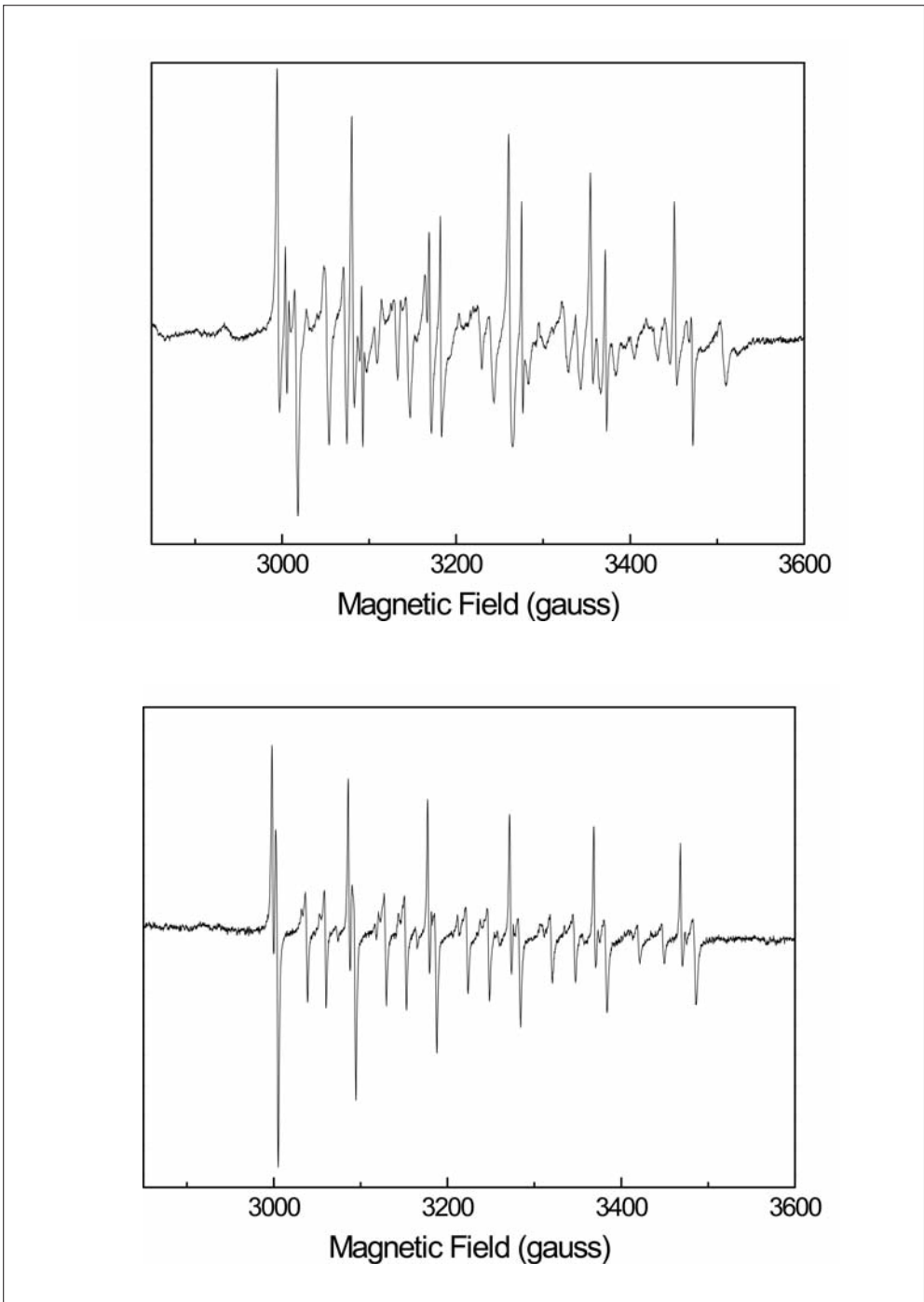


FIG. 3. Sample EPR spectra of the draped female CO₂₃ assigned as Paros/Marathi (above) and the male torso CO₁ assigned as dolomitic Thasos (below). Details of marble EPR spectroscopy have been discussed elsewhere (ATTANASIO 2003). The large difference between calcitic and dolomitic marbles, however, is clearly evident from this Figure.

6 EPR VARIABLES		
1	INTENS	Intensity of the high field Mn ²⁺ signal
2	INTEGR	Integrated signal
3	WIDTH	Linewidth (high field doublet)
4	DOLOM	% of dolomitic Mn ²⁺
5	SPLI	Splitting of the high field doublet
6	SPREAD	Total spectral extension
4 MORPHOLOGICAL VARIABLES		
7	MGS	Maximum grain size
8	COLOUR	Sample colour (8-bit gray scale, 0 = black, 255 = white)
9	STDCOL	Colour standard deviation
10	ODOUR	Sample odour upon fracture (1 = absent, 2 = present)

TABLE 2. The ten experimental variables used to characterize the database and Cosa samples.

rathi (74); Pentelic (165); Proconnesus (158); Thasos, calcitic (69); Thasos, dolomitic (38).

The total number of groups is, in fact, 10 simply because the marbles of Thasos and Paros have been split each into two sub-groups. They are the calcitic and dolomitic Thasian marbles and the Parian marbles from the valleys of Marathi and Lakkoi (so-called Paros I and Paros II, respectively).

Combining spectroscopic and petrographic information in the database is already an example of the multimethod approach. In spite of this, discrimination of certain marble varieties is still unsatisfactory and may lead to doubtful assignments. For this reason the isotopic ratios of all the database samples were recently measured and reported (ATTANASIO *et alii* 2006), demonstrating that discrimination improves substantially when EPR, petrographic and isotopic variables are used in combination. In the present study, however, use of the multimethod approach is still limited to the few samples which could not be reliably assigned on the basis of the EPR and petrographic variables alone.

2. 3. Measurement Techniques

As stated above the 10 variables used for marble characterization were obtained by electron paramagnetic resonance spectroscopy (EPR) and petrographic analysis of the samples. The use of EPR spectroscopy in marble provenance studies has been discussed in de-

tail in the papers and books cited above. Here we simply recall that marble EPR spectra are based primarily on the presence of a magnetic Mn²⁺ impurity in the calcite or dolomite lattices. The spectra give detailed information on the concentration and properties of the guest ion, which in turn are related to the properties and origin of the host material. Sample spectra are presented in Figure 3, while the 10 variables are listed and briefly defined in Table 2. All measurements, either spectroscopic or petrographic, were carried out following exactly the methods and standardisation procedures discussed elsewhere (ATTANASIO 2003).

We must add that the 10 variables defined above exhibit widely differing discriminant capabilities, and, in general, form a redundant set of physico-chemical properties. The main purpose of the statistical analysis which follows is precisely that of finding the simplest and most efficient subset of variables in terms of discrimination, a problem whose solution depends, to some extent on the specific problem under study.

The isotopic variables used to verify the uncertain assignments are the usual ratios ¹³C/¹²C and ¹⁸O/¹⁶O expressed as per mil and referred to the Pee Dee Belemnite standard (HERZ and GARRISON 1998). In the case of the Cosa samples they were obtained commercially from the Stable Isotopes Laboratory of the Istituto di Geologia Ambientale e Geoingegneria del CNR, Roma.

2. 4. Data Analysis

The quarry database selected for this application is a matrix of 884 rows and 10 columns where each row represents a quarry sample and each column one of the experimental variables. An additional column is used to record the known provenance of the samples. The experimental data have been statistically processed, using discriminant function analysis, to obtain an optimal classification rule to be employed, subsequently, for assigning the unknowns. To this purpose discriminant analysis transforms the original variables into proper linear combinations (discriminant functions) capable of maximizing the distance between the various groups. In a second step the method defines a suitable 'distance' measure to assign the unknown sample to the 'closest' or most probable group (HUBERTY 1994, HAND 1981). A number of analytical expressions equal to the number of possible groups is obtained and used to calculate distances and probabilities. They are commonly called classification functions and, taken together, define the method classification rule. The performance is usually estimated by calculating the percentage of database samples which are correctly re-assigned using the classification rule. The re-substitution value obtained in this way is then verified using various statistical validation techniques (EFRON and TIBSHIRANI 1998, HAND 1997) or, in some cases, a set of test samples not belonging to the database.

The final formulation of the rule is also the result of an optimization process involving at least three additional steps: i. variable transformation (*e.g.* logarithmic) to improve the normality of data distribution, ii. quadratic analysis to take into account the different dispersion properties of the various groups, iii. variable ranking and selection to eliminate the less powerful variables, which are not only useless, but may even vitiate the classification performance. Ideally the final rule should combine simplicity with high classification performance, being capable at the same time to generalize correctly. This latter property indicates that the rule classi-

fies database samples or real unknowns with similar rates of success.

In the present case the analysis led to a linear classification rule using only five of the ten available variables, after logarithmic transformation. Three of the variables are the spectroscopic, EPR parameters INTENS, INTEGR, and WIDTH, while the other two are the petrographic or morphological variables MGS and COLOUR. 82,3% of the database samples are reclassified correctly in this way and it is satisfying to note that an identical rule has proved recently to be the best classifier in a number of different applications (ATTANASIO *et alii* 2003).

3. RESULTS AND DISCUSSION

3. 1. Assignment of the Cosa Samples [D. A.]

The results discussed so far indicate that although there are good chances of correct classification, the possibility of misclassifying some of the Cosa marbles is still relatively high. To minimize this possibility two probabilistic parameters are calculated and used to distinguish reliable from uncertain assignments. The first, the so-called posterior probability, indicates the most probable group under the assumption that the unknown belongs to one of the groups in the database subset. Values below 60-65% indicate that a reliable assignment is not possible and the sample must be considered in doubt between two or more different provenance sites. The second parameter, sometimes called typicality, is a distance-based quantity measuring the absolute probability that the unknown belongs to the chosen group and is a typical representative of that group. Low typical values indicate outliers or, perhaps, samples belonging to groups not included in the database subset or not known. Previous work has shown that 10%, corresponding roughly to a distance of about two standard deviations from the centre of the group, is a reasonable threshold for this parameter (ATTANASIO *et alii* 2001).

The results of the analysis carried out according to the procedure outlined above are summarized in Table 3 and presented graphically in Figure 4. Before proceeding with the discussion, however, we must note that

SAMPLE	DESCRIPTION AND INVENTORY	DISTANCE	TYPICAL PROBABILITY	POSTERIOR PROBABILITY	EPR/PETROGRAPHIC ASSIGNMENT	FINAL PROVENANCE
CO1	Male torso, CD975	0.3	1	1	ThD	ThD
CO2	Female foot, CC887/213299	1.04	0.96	0.86	Pe	Pe
CO3	Male foot + leg, CG238 + C67.250	9.8	0.08	0.96	Ca	Ca
CO4	Male foot + leg, CE15 + CD188/ 213289	9.88	0.08	0.99	Ca	Ca
CO5	Male torso, CE208	5.00	0.42	0.97	Pa/Lak	Pa/Lak
CO6	Female head, C73.11/21330	0.48	0.99	0.94	Pe	Pe
CO7	Draped female legs, C67.589	4.15	0.53	0.87	Ca	Ca
CO8	Draped female torso, CD976	4.02	0.55	0.99	Ca	Ca
CO9	Table leg, fragment, CC11	2.78	0.73	0.74	Ca	Ca
CO11	Diana, C9603	2.73	0.74	0.78	Ca	Ca
CO12	Herm, C9617	4.29	0.51	0.78	Ca	Ca
CO13	Herm, C9618	4.02	0.55	0.82	Pe	Pe
CO14	Lion head, CE952	1.39	0.93	0.93	Pe	Pe
CO15	Male loricate torso, C549/101245	12.08	0.03	0.98	Ca	Ca
CO16	Male torso, CC548/101246	6.19	0.29	0.81	Pa/Ma	Pa/Ma
CO17	Male torso, CA8/101244	6	0.31	0.65	Pa/Lak	Pa/Lak
CO18	Basin support, C75.1	4.75	0.45	0.62	Pe	Pe
CO19	Pan, CE1953/100113	10.26	0.07	0.62	Pe	Pe
CO20	Dionysus, C68.25A/101277A	3.42	0.64	0.87	Ca	Ca
CO21	Relief panel, C68.118	3.75	0.59	0.65	Ca	Ca
CO22	Herm, C68.10/100729	6.58	0.25	0.52	Pa/Ma (Ca 0.34)	Pa/Lak (see text)
CO23	Draped female, CD611	13.24	0.02	0.45	Pe (Ca 0.35)	Pa/Ma
CO24	Female head, C67.284	6.75	0.24	0.99	Ca	Ca
CO26	Togatus, CD610	14	0.02	0.99	Ca	Ca

TABLE 3. Provenance results for the 24 Cosa samples. The seven uncertain assignments, which underwent isotopic assessment, are shown with a gray background. Samples CO22 and CO23, reassigned on the basis of this procedure, are given in *italic*.

seven of the 24 assignments reported in Table 3 cannot be considered fully reliable. Six of them exhibit low typical values, below the 10% limit set above as a convenient threshold, while the seventh sample, CO22, is in doubt between Paros and Carrara owing to the low value of its posterior probability. Therefore, we verified the EPR/petrographic assignments by measuring the isotopic ratios of the seven samples (reported in Table 1) and carrying out a multi-method analysis of their provenance. Identical assignments were obtained for five samples, while the results disagreed for samples CO22 and CO23. Their respective EPR/petrographic and multi-method assignments are excerpted here from Table 3, together with the second most probable provenance and the posterior probabilities:

The isotopic plot of samples CO22 and

	EPR/PETROGRAPHIC	MULTIMETHOD
CO22	Pa/Ma (52%) / Ca (34%)	Ca (52%) / Pa/Lak (35%)
CO23	Pe (45%) / Ca (35%)	Pa/Ma (98%) / Pro(1%)

CO23 is given in Figure 3 and their final provenance (TABLE 3) can be summarized as follows:

CO22: the Pa/Ma marbles have a very characteristic isotopic signature with unique, highly positive values of the $\delta^{13}\text{C}$ variable. Therefore, the Pa/Ma provenance suggested by EPR can be easily discarded. The results of the multi-method analysis are in doubt between Carrara and Paros/Lakkoi. On the basis of the sample grain size (MGS = 1.2 mm) this latter is considered to be more likely.

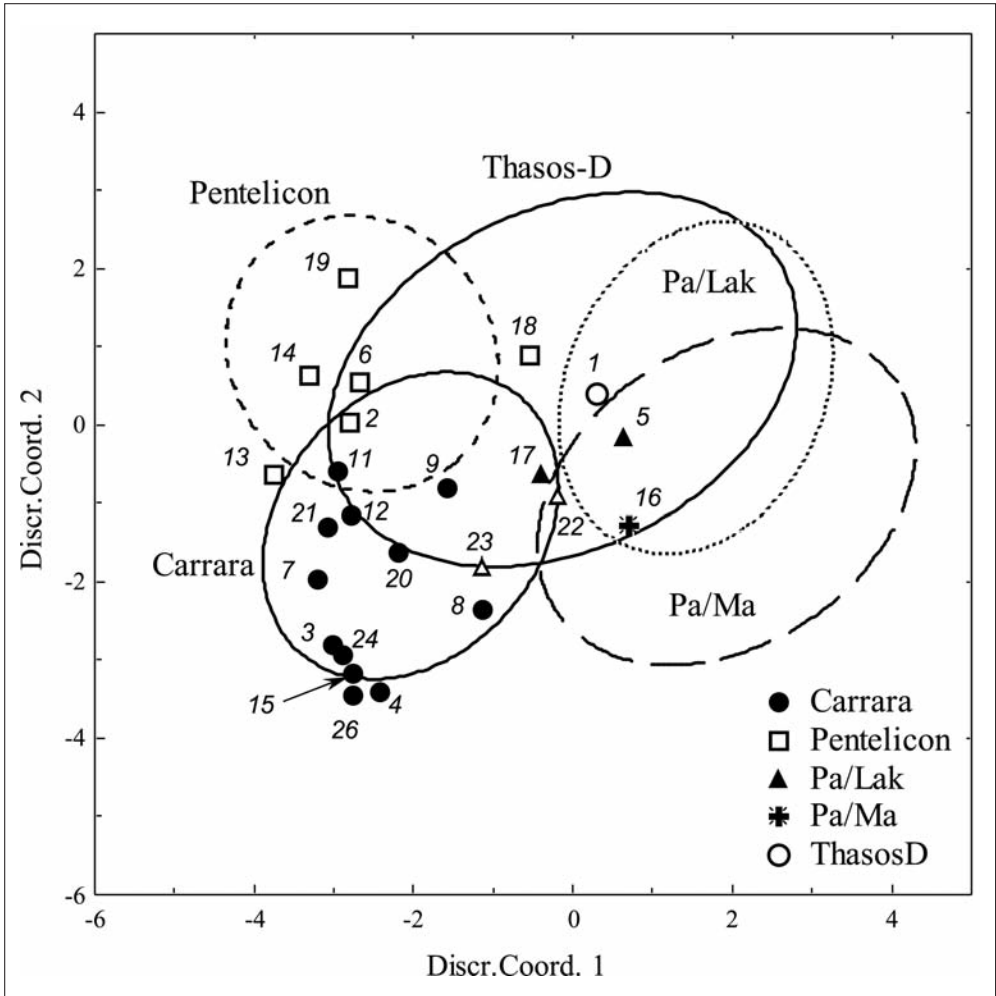


FIG. 4. Simplified discriminant plot including only relevant source fields (90% probability ellipses) and location of the experimental data points. The coordinates are linear combinations of the original variables. The final provenance of samples CO₂₂ and CO₂₃ (open triangles) has been established with the support of isotopic data and multi-method approach.

CO₂₃: for the same reasons given above the provenance of this sample is certainly incompatible either with Pentelic or Carrara. The isotopic data indicate that this sample is undoubtedly a Parian *spilychnites* (Pa/Ma).

This brief discussion indicates that, while 22 samples (92%) were assigned correctly by the EPR/petrographic analysis, additional variables are still necessary for a general solution of the marble provenance problem. The spectroscopic and isotopic methods appear, indeed, to complement each other sat-

isfyingly and are expected to operate much more efficiently when used simultaneously in a multimethod framework.

The most important outcome of the provenancing analysis carried out so far is that the use of Carrara marbles at Cosa, although widespread, is not so universal as might be expected. Twelve Carrara samples were detected, but several other varieties were used, including Pentelic, Paros, and dolomitic Thasos, and account for 50% of the total sampled artefacts.

Most notable is the use of the highly prized Parian marble known as *lychnites* to manufacture an over life-sized male torso and a nearly life-sized draped female figure. The *lychnites* were extracted, in limited quantities and often only in small blocks, from the underground quarries known as Grotto of the Nymphs and Grotto of Pan in the vicinity of the village of Marathi. Their use in many Roman statues was limited to sculpting the head, whereas larger *lychnites* sculptures were made sometimes by assembling smaller blocks (GNOLI 1988). For this reason the discovery of two rather large *lychnites* sculptures at Cosa is particularly interesting.

Another Cosa artefact requiring some further comment is the male torso CD975 (CO1) assigned as dolomitic Thasos. Dolomitic marbles are easily detected by EPR spectroscopy and other analytical techniques, and can even be identified by means of simple chemical tests. In spite of this, dolomites have often gone unnoticed. Once detected, there is no alternative to the assignment of a dolomitic artefact to the quarries of Thasos. Other dolomitic sources, located for instance in the Italian and French Alps, were of purely local use in antiquity and are not present in the database. The properties of this torso, however, fully match those of Thasian dolomites and strongly support this provenance.

3. 2. *The Sculptures from Cosa* [J. C.-C.]

3. 2. 1. Late Republican (late 2nd century-ca. 70 BC)

Of the 24 pieces tested, I will discuss only those that make a significant contribution to art historical or marble studies.¹ The most noteworthy outcome of the marble analysis reinforces the extent of Cosa's prosperity in the late second and early first centuries BC in terms of the small-scale sculpture and furniture now shown definitively to have been made of Greek marble. The context for these is the private home, and excavations in the *forum* and residential blocks nearby have uncovered houses that were either remodelled or constructed anew soon after 100 BC (see city plan; FIG. 1).² A few blocks away from the *forum*, properties of ordinary citizens were enlarged or remodelled as their owners became more wealthy. The House of the Salvii is one that appears to have been occupied by the same family from when it was first built in the early 2nd century until the sack of ca. 70 BC to judge from black glaze plates with the family's name scratched on their undersides. Two were found in a context of the early 2nd century and one in an early 1st century BC context.³ This house was equipped with a spacious

¹ Not discussed here are, as listed in Tables 1 and 3, most unpublished:

CO2: Female foot, Pentelic. Cosa, Antiquarium, Inv. CC887. This foot was made separately for attachment to a statue made in a less expensive marble, a common practice in the early Empire. See CLARIDGE 1988, 144, unpublished.

CO3: Male foot in two joining pieces, Carrara. Cosa, Antiquarium, Inv. CG238 (foot), C67.250 (leg), unpublished.

CO5: Under life-sized male torso, Paros / Lakkoi. Cosa, Antiquarium, Inv. CE208. Most likely from a domestic statue. COLLINS 1970, 130-131 and figs. 43-44, otherwise unpublished.

CO6: Female portrait head, Pentelic. Cosa, Antiquarium, Inv. C73.11. Made for insertion into a body probably of a lesser quality marble; on this practice see CLARIDGE 1988, 144. Julio-Claudian, unpublished.

CO7 and CO8: Lower and upper bodies respectively of a draped female figure, Carrara. Cosa, Antiquarium, Inv. C67.589 (legs), CD976 (torso). Though not joining, their matching statuary types, style, workmanship, and findspots indicate that they belong together. COLLINS 1970, 101-108, figs. 26-30, otherwise unpublished.

CO9: Fragment of slab-like table leg, Carrara. Cosa, Antiquarium, Inv. CC11. This belonged to the matching, and better preserved, leg of an inscribed offering table, now missing; see COLLINS 1970, 191-194 and figs. 83-84; COHON 1984, 123-134 on the type, 405-407, Cosa 272. The inscription on the missing leg records a dedication to Drusus Caesar, son of Tiberius Augustus and grandson of the divine Augustus; Drusus died in AD 23.

CO12: Draped and headless herm from the cache of furniture in the House of Diana, Carrara. Cosa, Antiquarium, Inv. C9617 Taylor in FENTRESS 2003, 201-202 and pl. 92. Here, fig. 11, left.

CO21: Relief panel with attributes of Minerva, Carrara. Cosa, Antiquarium, Inv. C68.118. Found in the Shrine of Liber Pater. COLLINS-CLINTON 1977, 55-56 and fig. 28, otherwise unpublished.

CO24: Female portrait head with joining bust, Carrara. Cosa, Antiquarium, head: Inv.; bust, Inv. CE730. COLLINS 1970, 50-55 and figs. 5-7 (Agrippina Minor), otherwise unpublished.

² BROWN 1980, 63-76; BRUNO, SCOTT 1993; FENTRESS 2003.

³ BRUNO, SCOTT 1993, 31-43 and pls. 14-16.

bathroom in which was found a terracotta bathtub of a common Hellenistic 'sitḗ-bath' type.¹ The House of the Treasure is so called from the hoard of 2004 *denarii* stored in a jar buried beneath the floor of a pantry shortly before the sack of 70 BC. Since most of these date between 110/105 and 72/71 BC and exhibit few signs of wear from circulation, they have been interpreted as income paid the owner directly by the State, presumably for grain shipped from Cosa. We know the name of the home-owner and businessman in question, Quintus Fulvius, from his name scratched on pieces of black-glaze ware found in his house.² Contemporary with the remodelling of this house soon after 100 BC is the construction of the House of the Skeleton across the street (Street M). This is an atrium house with a portico overlooking a large, formal garden at the back. Its orientation facing Street 5 necessarily differs from that of its neighbors because it was constructed into the garden plots behind the houses fronting along Street N.³ This house was beautifully decorated in the latest styles. Most of the rooms, including the *atrium*, had red *signinum* floors set with white *tesserae*, and some had walls decorated in the First, or Masonry Style. The wall treatment of the *triclinium* was quite elegant, for it contained a string course on which were painted garlands and winged erotes, details more common in houses on Delos than in Pompeii.⁴ The décor of these rooms is typically late Hellenistic and parallels for floor and wall treatments may be found all over the Mediterranean. The plan of the House of the Skeleton stands out for being an atrium design in a neighborhood of simpler homes with a plain courtyard. The House of Diana, on the other hand, is one of the old atrium houses bordering the *forum* that belonged to one of the elite families of Cosa.⁵ Located

opposite the temple adjacent to the comitium/curia complex, it was occupied from the early 2nd century to ca. 70 BC, apparently with no modifications. Behind the living quarters is a garden and a small bath-house.⁶ Augustan reoccupation and consequent rebuilding in the late 1st century BC eradicated all signs of destruction that befell the house during the sack of ca. 70 BC.⁷

The late second and early first centuries BC also reflect the thriving activities of Cosa's port and fishery: presumably the shipping of the grain by Q. Fulvius mentioned above and the export of wine and the manufacture of transport amphoras by the Sestius family in the Portus Cosanus. The Sestii built their shipping business during the course of the 2nd century BC, exporting wine from local vineyards westward to Gaul, mainly, as shipwrecks off the coast of Southern France attest, and to Spain. By the end of the century the Sestii were expanding their horizons into the eastern Mediterranean, as we know from amphoras of the Sestius type found in the Agora of Athens and on Delos, the hugely successful *emporium* that operated between 166 BC, when it became a free port, and 88 BC, when it was attacked by Mithridates VI, and finally 69 BC, when it was sacked by the infamous Cilician pirates.⁸ It is, in fact, the securely dated context of the Sestius amphoras in Athens that provides the date for this expansion of the Sestius interests in the late 2nd century.⁹ This contact with the artistic centers of Athens and Delos and the rising social status of the Sestii are what attract our attention here. The first needs no introduction. As to the Sestii, we know that Lucius Sestius the Elder was the first in the family to look to Rome for social advancement by winning the tribuneship around 91 BC.¹⁰ By then the Sestii had acquired their great wealth, which

¹ *Ibidem*, pl. 21.

² On the hoard and its owner, see BUTTREY 1980, 87-88; BRUNO, SCOTT 1993, 95, 97. On the house see BRUNO, SCOTT 1993, 79-97, 93-94 deal with its date.

³ BRUNO, SCOTT 1993, 128-137; on the dating see 146-148.

⁴ *Ibidem*, 131-137 (wall decoration), 128-131 (pavements).

⁵ See FENTRESS 2000, 11-24 and 2003, 21-26 on the hierarchy of housing at Cosa.

⁶ EADEM 2003, 14-21.

⁸ WILL 1979; Eadem in McCANN 1987; WILL 2001, and Eadem 2005.

⁹ WILL 1979, 339, 346-47; Eadem in McCANN 1987, 176; WILL 2005, 259.

¹⁰ McCANN 1987, 34; BROWN 1980, 72. See also WILL 1979, 348-350, and EADEM 2005, 257-258.

⁷ *Ibidem*, 32.

may well have included a villa in the *ager Cosanus*, since we know that his son Publius had a villa there.¹ In short the elder Lucius was in Rome during a time when wealthy Romans were acquiring imported marble statuary and furniture to decorate their homes in town and country.² This brief review of Cosa in the late Republic makes it clear that it was a thriving coastal town with connections to Rome by the early 1st century BC and that the Portus Cosanus must have provided both a window on and access to the goods of the late Hellenistic world to the East.

The domestic sculpture and furniture in Greek marble that could have adorned homes of the well-to-do citizens of Cosa in late Republican times and that were tested consist of one, and perhaps more untested, statuettes, two herms, a piece of a tripod table, and a fluted columnar pedestal. All exhibit a late Hellenistic style and are types common in Hellenistic domestic contexts all over the Eastern Mediterranean. A statuette of Pan, one of the herms, and the piece of the tripod table are carved of Pentelic marble.

The Pan is one of the finest pieces to have come to light at Cosa (TABLES 1 and 3; CO19; FIGS. 7-8).³ It was found in the store-room of a shop that was covered by the fall of the northwest wall of the *basilica* in the earthquake of AD 51 and never cleared out afterwards. His horns, forelock, and the tip of his projecting beard are missing; the broken surfaces were carved away to form de-

pressions, each containing a dowel hole presumably for ancient repairs, now missing. His right lower leg and front of the plinth are modern restorations. Since this piece requires lengthier commentary than can be related here, brief remarks will suffice. Pan is shown twisting in a dance-like motion reminiscent of the well-known Dancing Faun from the House of the Faun in Pompeii but with his hands (tied?) behind his back. This imagery is related to a theme of Pan and Eros engaged in a boxing match which occurs mostly in the Roman pictorial arts; the story in literary form is lost. Free-standing representations are few and small in size, about a meter or less in height; this suggests a domestic function for all, including the Cosa Pan.⁴ The active pose, the strong musculature of arms and torso, the expressive rendering of his face, and even the star-shaped whorl of hair on the back of the head, are all features of the late Hellenistic style of Western Asia Minor: Pergamene or Rhodian.⁵ The style of the Cosa Pan, in fact, closely resembles that of Pan in the 'Slipper Slapper' Group of Aphrodite, Pan, and Eros from Delos, now in Athens.⁶

Two pieces of furniture in Pentelic marble are a small lion's head originally belonging to a leg of a tripod table and a headless, draped herm, both of which share stylistic parallels with finds on Delos. The lion's head was found near the surface in an atrium house adjacent to the *basilica* (TABLES 1 and 3; CO14; FIG. 9).⁷ It would have decorated

¹ BROWN 1980, 71; RICHARDSON 2001, 54. About the public life of Publius we know much more, for he held several political offices in Rome between 63 and 47 BC, he owned a home there, and he was a friend of Cicero and a supporter of Pompey. On Publius see *ibidem*, 49-55; CICERO, *Pro Sestius*. Publius's career, however, lies outside the chronological limits of the late Republican embellishment of Cosa. ² See also below.

³ COLLINS 1970, 121-129, figs. 38-41, otherwise unpublished. H. 0.58 m. without plinth; H. of triangular plinth varies from 0.035 to 0.045 m. Found with rectangular plinth of a compact dark grey limestone, H. 0.065, L. 0.244, W. 0.169 m; three sides are finished with two narrow recesses for inlay in other stones. I thank Olga Palagia for checking details for me in Athens and Lawrence Richardson jr. for his helpful suggestions.

⁴ The back of the support is flat and contains a hole for attachment to a wall behind – or even a support for a table-leaf. If the latter is true, the figure of Pan was originally conceived as a table support.

⁵ For more discussion of the motive and lists of examples in various media, see MARQUARDT 1995, 122-126, with earlier bibliography. See also LIMC, 8, Supplement, 1997, s.v. *Pan*, no. 193, and LIMC, 3, 1986, s.v. *Eros / Amor / Cupido*, nos. 239-243.

⁶ National Museum Inv. no. 3335, Parian marble; see KALTSAS 2002, 294-295, no. 617, with further bibliography. Dated ca. 100 BC.

⁷ COLLINS 1970, 181-182, fig. 75; MOSS 1988, no. C21 on 718-719. Cosa, Antiquarium, Inv. no. CE952; preserved H. 0.165 m.



FIG. 7a. Pan, front view. Cosa, Antiquarium
(photo D. Attanasio).

the top of a feline leg whose upper part turned into a ruff of acanthus leaves on which rested the head.¹ The effect of the original leg would have been decorative and eye-catching with the smooth and rounded



7b. Pan, side view, before modern restorations in head removed
(photo J. Collins-Clinton).

features of the face and joints of the leg contrasting with the rougher texture of the fur and the acanthus leaves. The drill is used sparingly yet effectively in the head to accent the eyes and nostrils. A very close stylistic parallel is a head from a table leg from Delos.² The combination of Greek marble and a late Hellenistic style with parallels on De-

¹ See Moss 1988, type 9; see 37-43 for a discussion of this type of table; on workshops see 195-206.

² DEONNA 1938, 45 no. B4679 and pl. xx, no. 144.



FIG. 8. Pan, head. Cosa, Antiquarium (photo D. Attanasio).

los suggests that the Cosa table may have been imported from Greece.¹ A tantalizing discovery of a feline table leg of just the type that could actually belong to the lion's head came to light in the House of Diana in the portico overlooking the garden amidst fallen plaster (FIG. 10).² The powerful forms of muscles and joint in the leg could well match the lively treatment of the lion's head. A three-pronged stretcher found nearby may belong to the same table according to the excavators. It has two inscribed marks: the letter E in the center of the top and the Roman numeral II on the preserved joint face of the complete prong; this would have indicated which leg to attach to this prong. The marble is considered the same as that of the feline leg: white and fine of grain.³

The headless, draped herm comes from a Julio-Claudian context in the garden of the



FIG. 9a. Lion's head from tripod table-leg, front view. Cosa, Antiquarium (excavation photo courtesy American Academy in Rome).



FIG. 9b. Lion's head from tripod table-leg, side view. Cosa, Antiquarium (excavation photo courtesy American Academy in Rome).

¹ The discovery at Cosa of a triple-pronged stretcher for a tripod table made of a medium-grained white marble inscribed on top with the Greek letter K may reinforce this attribution; Cosa, Antiquarium, Inv. C69.285; Moss 1988, C22 on pp. 719 and 202-203 on attributions to workshops in Greece. The marble has a warm tonality not associated with Carrara marble. This stretcher was found just below the surface in another *atrium* house on the *forum* opposite the *basilica* and next door to the House of Diana.

² Taylor in FENTRESS 2003, 51 and pl. 11 for findspot; also 199-200. It is the only piece of furniture not found in the garden, possibly an indication that it was originally placed indoors.

³ Taylor in FENTRESS 2003, 51 and no. 10 on 199-200. Cosa, Antiquarium, Inv. C9713; preserved W. 0.33 m. On the letters cut into this and the other stretcher mentioned in note 1 above see Moss 1988, 197-198; the letter E could as easily indicate a Greek workshop in Italy as one abroad.



FIG. 10. Table-leg from House of Diana
(photo after *Cosa v*, pl. 89, re-
printed with permission of E. Fentress).



FIG. 11a. Herms from the House of Diana
(Carrara marble).
Cosa, Antiquarium (photo after *Cosa v*, pl. 93,
reprinted with permission of E. Fentress).



FIG. 11b. Herms from the House of Diana
(Pentelic marble).
Cosa, Antiquarium (photo after *Cosa v*, pl. 92,
reprinted with permission of E. Fentress).

House of Diana (TABLES 1 and 3; CO13; FIG. 11, right).¹ This house underwent two phases of remodelling beginning with the Augustan resettlement of the town, and the herm was discovered in the later of these.² It was part of a cache of marble furniture jumbled together inside a small shrine dedicated to Diana, as epigraphic evidence shows.³ The tables and other herms had presumably been used in the garden.

The herm exhibits a rather decorative arrangement of drapery. There is a clearly defined overfold that ends almost halfway down the shaft. A pair of vertical folds terminating in a flat omega-shaped arrangement forms a frame on either side. From the bottom of the overfold falls a similar arrangement of vertical folds framing the looping ones in the center. The vertical folds terminate in inverted omegas that echo those above.⁴ Below this fall of folds is another, much simpler, in which thin vertical folds alternate with plain, flat areas. The total effect is reminiscent of a peplos worn over a chiton woven of a finer material; yet there is no clear indication of breasts.

The furniture in this cache has been published as Carrara marble based on ocular examination, but the herm considered here has proved to be Pentelic. This, along with the observation that a stylistic parallel for a similarly draped pillar herm exists at Delos, is what attracts our attention here.⁵ The Delos herm exhibits a similar, though not identical, cascade of increasingly elongated parabolic curves in front, framed on each side by long, straight folds in higher relief. The lower shaft looks to be unfinished. As in the Cosa herm,

the shaft is not tapered. Its head, made in one piece with the shaft, is missing; this differs from the treatment of the Cosa herm, in which the head was made separately. The similarity between these two herms opens the question of the origin of the pieces of furniture in the cache where the Cosa herm was found. R. Taylor, in his commentary on these furnishings, correctly notes that they reflect the usual assemblages of garden herms, tables, and basins found in the gardens of Pompeii in settings that date primarily after the earthquake of AD 62.⁶ But, he also notes that, although we cannot be certain of where these pieces were made, in Italy or overseas, those carved of Carrara marble surely were made in the region of Luna near the sources of the local white and grey marbles.⁷ Since we now know that the one herm, and possibly other pieces, was made of Pentelic marble, we may give greater weight to the idea that it could have been made abroad (or by a Greek workshop in Italy) in late Hellenistic times and that it could have been brought to the House of Diana from elsewhere in town, possibly by scavenging the ruins of the late Republican houses. Supporting the latter is the discovery among the marble sculptures found in the House of Diana of pieces of reliefs decorated with vegetal motives and a piece of a Suovetaurilia frieze, all of which originally belonged to an Augustan altar on the *arx*.⁸ Since we know that late Republican *atrium* houses lined both sides of Street p, which leads from the *arx* toward the *forum* just at the back of the House of Diana, it is entirely possible that pieces of furniture were scavenged from

¹ Taylor in FENTRESS 2003, 202-203, no. 15 and pl. 93. Cosa, Antiquarium, Inv. C9618. Complete but for head, made separately for insertion into socket; broken in two pieces. Dowel hole on each side at shoulder level for attachment of arm bars. H. 0.902 m. The bottom of an almost identical herm was also found in the same place: Taylor in FENTRESS 2003, 202-203, no. 16, pl. 94; Cosa, Antiquarium, Inv. C9687. ² FENTRESS 2003, 32-62.

³ Bodel, *ibidem*, 45-51.

⁴ This arrangement is easier to see in the fragment of the matching herm, Cosa Inv. C9687, mentioned above in note 1 on this page.

⁵ Taylor in FENTRESS 2003, 203; MARCADÉ 1969, pl. XIX, bottom right and p. 109: mantle herm in the Palestra of Granit, no inv. number.

⁶ Taylor in FENTRESS 2003, 53-54. One thinks, for example, of the gardens in the House of the Vettii (JASHEMSKI 1993, 153-155 and FANT 2002), the House of the Golden Cupids (JASHEMSKI 1993, 159-163), and the House of M. Lucretius (DWYER 1982, 19-52 and JASHEMSKI 1993, 231-233). ⁷ Taylor in FENTRESS 2003, 54.

⁸ FENTRESS 2003, 62 and Taylor in FENTRESS 2003, 208-210, no. 23 and pl. 101 (Suovetaurilia relief, Cosa Inv. C9615) and 212-213, no. 30 and pl. 106 (fragments of decorative architectural frieze, Cosa Inv. C9671a-c, C9710). See also COLLINS 1970, no. 38ab, 207-201, figs. 86-87 for other pieces of the Suovetaurilia frieze.



FIG. 12. Columnar pedestal. Cosa, Antiquarium (photo J. Collins-Clinton).

the ruins of those houses that were not refurbished during and after the Augustan resettlement.¹

Two pieces exhibit a white marble that is coarser in texture than that associated with Pentelic. The properties of one of these nevertheless better fits those of Pentelic than the other possibility, Parian marble from the Lakkoi quarry.² This is a fluted columnar pedestal found in a late Roman context in a different part of the same atrium house as the lion's head (TABLES 1 and 3; CO18; FIG. 12).³ It is a type extremely common from late classical and Hellenistic times in domestic

contexts all over the Greek East and South Italy. This pedestal is an excellent example of E. Pernice's Group 2b of Sullan/pre-Imperial date.⁴ The thick, short proportions contrast with the slender, more elegantly proportioned examples of later date, and this and the choice of marble confirm the earlier dating for the Cosa piece, although they do not indicate the place of manufacture, abroad or in a Greek workshop in Italy.

A monolithic herm of Dionysus made as the support for a monopod table was found in the shrine of Liber Pater along with other sculptures reused in the late antique context (TABLES 1 and 3; CO22; FIG. 13).⁵ It belongs to a sub-category of Type 5 of table types analyzed by C. Moss, in which the herm's head, the narrow back-pillar, and the shaft are carved of one piece of marble and set into a separate base.⁶ The head exhibits a combination of archaizing and classicizing features. The face has a classical look with its triangular forehead, sharply defined brows, long nose, and deeply set almond-shaped eyes surrounded by puffy lids. The simplicity of the face contrasts with the complexity of the hairdo whose decorative elaboration is based on a combination of two different hair styles, a characteristically late Hellenistic feature. One is the short archaistic forehead hair arranged in rows of curls with drilled centers; the other is the long, looped-up hair in back, which goes back to early classical hairdos of Apollo.⁷ The hairdo is ren-

¹ Traces of one atrium house have been found on the *arx* itself not far from Temple D; see FENTRESS 2003, 31-32 and Figure 13.

² Although the maximum grain size of 1.4 mm is not typical of Pentelic, the EPR intensity of 0.624 is far too much for Lakkoi. D. Attanasio assures me that «there are a few Pentelic samples in the database with medium values of the grain size (24% have MGS larger than 1 mm) whereas there is not a single quarry sample from Lakkoi with intensity higher than 0.350» (e-mail communication, 27 May 2008). This pedestal is then a good example of how a visual assessment of the type of marble can be misleading.

³ Unpublished. Cosa, Antiquarium, Inv. C75.1; H. 0.525 m. Remarkably well preserved except for chips in upper rim. Top has shallow square mortise (0.115 m on a side) for securing the tenon of a shallow basin. A limestone basin of the type usually mounted on these pedestals and found in one of the late Republican houses near the House of the Skeleton, but not belonging to our marble pedestal, has been placed upon it in the Antiquarium. The shaft has 20 deep flutes without tongues at their tops.

⁴ PERNICE 1932, 48-50.

⁵ COLLINS 1970, 155-166, no. 23 and figs. 57-58; COLLINS-CLINTON 1977, 52-53, no. 4 and fig. 25; MOSS 1988, 543, no. A193 and 26-30 on the type, Type 5. Cosa, Antiquarium, Inv. C68.10; H. 0.825 m, W. of untapered shaft 0.135 m. Behind shaft is a narrow, projecting back-pillar that does not quite reach the top of the herm's head; the upper surface of this contains a dowel hole for attaching a crowning member to which would have been attached the table-leaf. The bottom of the shaft has a roughly picked tenon for insertion into a base.

⁶ MOSS 1988, 27-28 and no 31. The crowning capitals, also made separately, tend to be simple in form. None of the supports of this sub-category are carved of a coarse-grained marble.

⁷ On the combination of these two hair styles in beardless heads see HARRISON 1965, 137-138.

dered in a very pictorial way, featuring chiselled locks close to the head, drilled curls over the forehead and beside the temples, and long hair in back carved in relief on either side of the back-pillar. This is looped and tied so the ends flip out in tiny curls with drilled centers. A twisted fillet holds the hair

in place, and a long *taenia* loops over the fillet behind the ears, its ends folded on the armbars. The head turns ever so slightly, another Hellenistic trait – interesting for a herm made as the support for a monopodium table.¹ The drill is used judiciously: to separate the lips, to articulate the folds of the *taenia* and the looped-up hair at the back, to separate the puffs of hair before the ears from the cheeks, and, above all, to drill the centers of the curling ends of hair. Such finely executed and elaborate herms as this one, in which the turning head is carved more than three-quarters round and in one piece with the shaft, seem to be rare among Roman examples, judging by the ones in Pompeii. The existence of monolithic herm supports for monopodium tables from Delos shows that the type has its origin in Hellenistic times,² and this may be true of the herm from Cosa.

Of all the samples that we have analyzed, this is the only piece with a marble provenance still in doubt. The multimethod analysis assigns it to Carrara with Paros/Lakkoi as a second choice. Figure 3 shows the quarry plots; the herm is number 22 within the Carrara plot and very near the edge of Paros/Lakkoi. Considerations other than those of the multimethod analysis can be brought to bear upon this problem, in particular the maximum grain size and the style

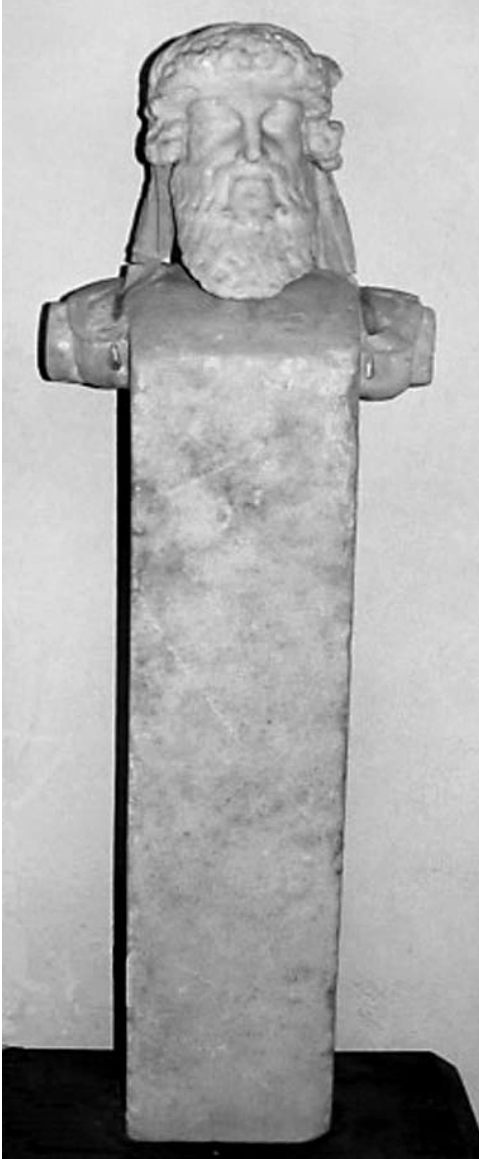


FIG. 13. Herm from Shrine of Liber Pater. Cosa, Antiquarium (photo D. Attanasio).

¹ I am grateful to Robert Cohon for pointing this out to me.

² DEONNA 1938, 36, note 3.



FIG. 14. Hellenistic torso. Cosa, Antiquarium (photo D. Attanasio).

of execution. The MGS of 1.2 mm is rather large for most Carrara marble and better fits an attribution to Paros/Lakkoi. The Hel-

lenistic style reinforces this attribution. Assuming that this herm was carved of Parian marble from Lakkoi, one wonders whether it was also imported to Italy ready-made or made in Italy in a Greek workshop.

Cosa has yielded an over life-sized statue also of late Hellenistic date and executed in *lychnites* marble from Paros. This is the torso of a statue made to represent Asclepius in his characteristic pose with one hand on his hip; traces of his right hand remain there (TABLES 1 and 3; CO16; FIGS. 14-15).¹ It was made of two main blocks of marble for upper and lower body in a strictly Hellenistic method of piecing and executed in a very Hellenistic style. The piecing involves joining the upper and lower body horizontally through the hips, roughly where the upper edge of the *himation* crosses the body. The joining surfaces are worked so that they are level, roughened, sometimes using *anathyrosis*, and contain a square mortise in the center and a pour channel for the lead used to secure the dowel joining the two pieces. The placement of the join where the *himation* crosses the body in front effectively facilitates hiding the join



FIG. 15. Hellenistic torso, details: attachment surfaces on proper left side; underside. Cosa, Antiquarium (excavation photos courtesy American Academy in Rome).

¹ COLLINS-CLINTON 1993. Cosa, Antiquarium, Inv. CC548. It was found in a medieval wall on the *arx*. See also RIDGWAY 2000, 169.

among the folds of the garment. Often, however, it was necessary to add separate pieces of drapery designed to straddle the main seam at critical points to hide it.¹ The size of the torso, the method of attaching upper to lower body, and other traces of a complex mode of piecing find a very close parallel in the Poseidon from Melos in the Athens National Museum, also of Parian marble.² Some years ago I published this torso as carved of Pentelic marble based on visual assessment; that this has proved wrong shows how easily one can misidentify by eye

two very similar marbles. Parian *lychnites* was a marble much favored by Attic sculptors; this combined with the Hellenistic style and method of piecing used in the Cosa torso seem to me to show clearly that it was likely made in Greece in the 2nd century BC and somehow made its way to Cosa.³

A small head from the House of Diana provides an opportunity to examine two other female heads originally belonging to statuettes, all three of which exhibit a strongly Greek style and may, in fact, be of Greek workmanship. None of these was tested be-



FIG. 16a. Diana from House of Diana. Cosa, Antiquarium (photo after *Cosa v*, pl. 81, reprinted with permission of E. Fentress).

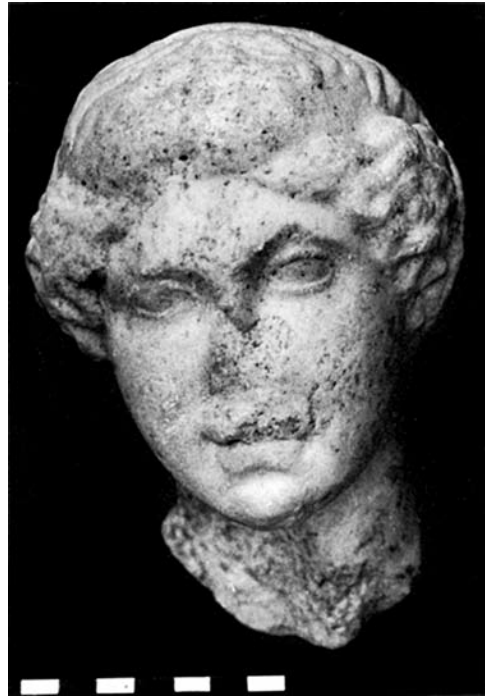


FIG. 16b. Diana from House of Diana. Cosa, Antiquarium (photo after *Cosa v*, pl. 78, reprinted with permission of E. Fentress).

¹ On this technique of piecing see further COLLINS-CLINTON 1993, 262-268, and RIDGWAY 2000, 169 and 188 n. 65.

² SCHÄFER 1968, 55-68; KALTSAS 2002, 290-291. The statues of Zeus/Hero from Pergamon and the Aphrodite from Melos also exhibit the mid-body piecing technique in which small, separately made pieces of drapery cover the join; see COLLINS-CLINTON 1993, 264-266, 267; RIDGWAY 2000, 149-150 (Zeus/Hero) and 167-169 (Aphrodite). According to RIDGWAY 2000, 169, these and the Cosa torso can be dated to the middle of the 2nd century BC, although they are not attributable to the same workshop.

³ For a discussion of how this statue might have come to Cosa see COLLINS-CLINTON 1993, 270-272. See also RIDGWAY 2000, 169 for an attribution to a Greek immigrant working in Italy in the 2nd century BC. This attribution, though logical, does not consider the question of why a statue of Asclepius would have been commissioned or purchased for Cosa when there is no sanctuary dedicated to him there; on this see COLLINS-CLINTON 1993, 272.



FIG. 17. Female head from Shrine of Liber, C67402. Cosa, Antiquarium (excavation photo courtesy American Academy in Rome).

cause they are too small for removing a marble sample. The first-mentioned head (FIG. 16, right) is carved of a very fine-grained marble, probably of Greek island origin according to the excavator.¹ It has a roughly triangular forehead above widely set, sharply rendered eyes, and smooth, broad cheeks. The hair is treated in broad waves, framing the face at the temples, and gathered at the back into a *sakkos*. There is a large rectangular mortise in the back, presumably for attachment to a background as if it once belonged to a high relief.² Its Greek marble encourages a comparison with two other female heads broken from statuettes; these heads are carved from a coarse-grained white marble. Both were found reused in the late antique Shrine of Liber in the *forum*. The first



FIG. 18. Female head from Shrine of Liber, C67403. Cosa, Antiquarium (excavation photo courtesy American Academy in Rome).

of these, which may have belonged to a statuette of Venus, also exhibits a late classical or early Hellenistic style (FIG. 17).³ The shape of the face with its triangular forehead, the eyes, and the soft modelling are Praxitelean in spirit. The narrow eyes have thick lids and their inner corners are deeply inset. The head tilts to its left and the eyes have an introspective look. The hair, parted in the center, is drawn away from the face and gathered into a bun at the back. The wavy hair is roughly chiselled, contrasting with the smooth surface of the face. The inner corners of the eyes, the nostrils, and the corners of the mouth are lightly drilled, creating pinpoints of shadow that further enliven the face.

The second is a bust of a statuette that was assembled from several separately made pieces (FIG. 18).⁴ It was made to fit into the body of a draped woman. At the center front is the remnant of the dowel hole for securing the bust to the body. Her raised right shoulder preserves a bit of finely engraved drapery

¹ Taylor in FENTRESS 2003, 193-195, no. 3 and pls. 80-82. Cosa, Antiquarium, Inv. C9674. H. 0.20 m. Considered a Greek original of late classical date from Greece, South Italy or Sicily; possibly representing Demeter.

² Taylor in FENTRESS 2003, 194.

³ COLLINS 1970, 135-137, no. 17 and figs. 47-48; COLLINS-CLINTON 1977, 50-51, no. 2 and fig. 23. Cosa, Antiquarium, Inv. C67.402. H. 0.111 m. Broken just below chin.

⁴ COLLINS 1970, 138-141, no. 18 and figs. 49-50; COLLINS-CLINTON 1977, 51-52, no. 3 and fig. 24. Cosa, Antiquarium, Inv. C67.403. H. 0.143 m.

falling diagonally toward the front, leaving the left shoulder bare. The edge of the drapery must have helped conceal the join. The lower edge is preserved across the entire back and most of the chest and shoulder on the proper left side. The underside is flat and smooth, roughened here and there with a point. The bust must have rested on a correspondingly flat surface in the body of the statuette that sloped slightly downward toward the front so that the dowel would secure the two parts more or less vertically.¹ Her right arm was attached separately, as part of a flat surface for attachment and the ends of two broken dowel holes in her right shoulder show. Her head is that of a young woman with long hair drawn away from the face in broad, soft masses and gathered at the back of the neck where it falls down the back in roughly chiselled locks. Her oval face has a triangular forehead, her softly rendered eyes are deeply set, and she has a long, fleshy neck. The surface modelling is smooth and soft, especially around the eyes, which gives a dreamy look.² This and the impressionistic rendering of the hair in easy masses are characteristically Hellenistic in style. It is difficult to imagine the body type for the original statuette other than the obviously slipping of the dress off her left shoulder. The long hair loosely gathered at the neck would suggest a young woman, possibly Kore, more likely Venus. Two statuettes of Aphrodite from Delos exhibit a similar coiffure.³

The fact that these heads are made of Greek marble is suggestive of late Hellenistic workmanship in a center of artistic production in the Aegean, probably Delos rather than Rhodes, especially given Cosa's trade connection with Delos as outlined above. As J. Pedley has remarked in connection with some statuettes in Parian and Pentelic marble from a sanctuary of Venus at Paestum that was remodelled on two occasions, one in the middle of the 1st century BC and the other around AD 20, if they were made in Italy for the later refurbishing they would have been carved of Carrara marble.⁴ The same observation could as well apply to Cosa, given the Augustan resettlement of the town, but, if so it would be more likely – and more economical – that small-scale sculpture and furniture would have been made of Carrara marble, which these were not. A look at the many statuettes made on Delos and published by Marcadé reveals a multitude of female images and heads, mostly of Aphrodite, that compare favourably with the Cosa heads.⁵ Some exhibit more classicizing features, some more Hellenistic as can be seen especially in the treatment of the eyes (sharper or softer) or the hair (more carefully or more impressionistically rendered). Marcadé has noted at least seven Hellenistic workshops on Delos and, more relevant to one of the Cosa heads, has commented on the extent to which even statuettes were pieced, with separately made heads and arms in particular.⁶ In this regard

¹ The head of the 'Maiden from Chios' in the Museum of Fine Arts, Boston was made for insertion into a draped figure in much the same way; COMSTOCK, VERMEULE 1976, 40-41, no. 56: dated ca. 300 BC, made of Parian marble; almost life-sized at 0.36 m in height. I stress the manner of attachment in the Cosa piece because piecing in marble sculpture is quite common from the later 4th century BC on.

² The same treatment may be seen on a larger scale in the 'Maiden from Chios' in Boston, mentioned above, note 1 on this page.

³ MARCADÉ 1969, no. A5080, pl. XLII, no. A2129, pl. XLV and comments on hair styles on p. 243.

⁴ PEDLEY 1998, 205. This is a reference to the opening of the Carrara quarries in the later 1st century BC. Their location close to the sea and to a good port at Luna meant an increasingly lucrative marble industry there beginning ca. 20 BC for both sculptural and architectural purposes. Pedley also notes that, although a marble workshop has been inferred for Paestum, its output seems later and would have used Carrara marble.

⁵ MARCADÉ 1969, *passim*.

⁶ *Ibidem*, 102-105 on workshops, 105, 109-112, 318-319 and 415-416 on piecing. Philippe Jockey also comments on piecing in small scale statues from Delos; JOCKEY 1998, 182-183. Pedley has given a convenient summary of artistic production on Delos and notes that workshops continued there between the two sacks of 88 and 69 BC (PEDLEY 1998, 206). He has not, however, addressed the issue of piecing, despite the fact that all the missing heads of the statuettes from Paestum were made separately as were many arms that project from the original block of marble. This fact surely reinforces his attribution of these to Hellenistic Rhodian or Attic workshops. On piecing in Rhodian work see MERKER 1973, 8-9. On piecing in general in Greek statuary see CLARIDGE 1988, especially 139-141, with bibliography, where she notes increased use of piecing in Hellenistic times, and EADEM 1990.

we may spotlight the Cosa bust (FIG. 18), which has at least two Hellenistic parallels for the piecing technique on Delos.¹ Sculptors working on Delos preferred Parian to Pentelic marble.² The coarse texture of two of the female heads from Cosa, along with their style and the piecing technique used for one, suggest Parian marble from the Lakkoi quarry for them.

It is more difficult to pinpoint the workshops that produced the other statuary and furniture in Parian or Pentelic marble, other than to speculate that the over life-sized torso (FIG. 14) was made in Athens. The problem with attributing the herm and lion's head table leg to a Delian workshop is that artisans there preferred to work with Parian marble; works in Pentelic are apparently rare on Delos.³ We may instead consider that these two pieces reflect a late Hellenistic style common throughout the Greek world and that the Cosa pieces could have been made in Athens. It is also possible that they could have been made in Rome in workshops established by immigrant Greek sculptors in the 1st century BC. If so, the sculptors continued to work with marbles familiar to them.⁴ Nevertheless, the small-scale pieces are types that could easily have embellished the homes of Cosa's elite or upwardly mobile families in the early 1st century BC, a time when Cosa was prospering. That well-to-do Romans were beginning to furnish their homes with these emblems of luxury by ca. 100 BC in Rome is well known. This process began with the well documented plundering of works of art from the Roman conquests of Sicily and Greece, starting with the sack

of Syracuse in 212 BC and continued through the 2nd century to the sack of Athens by Sulla in 88 BC.⁵ Eventually workshops in Greek lands and finally in Rome itself became established to satisfy the Roman market for Greek works of art in the late Republic, reaching a peak in the 1st century BC.⁶ That the desire to adorn their private and public spaces with works of Greek art should soon work its way to cities and towns outside Rome should not be surprising, as the sculptures from Paestum demonstrate. Cosa's unique position on the coast, her thriving port, and the expanding social and commercial interests of the Sestii by ca. 100 BC, as outlined above, must have combined to create a ready market for these embellishments at Cosa. We know that members of the Sestius shipping firm were in Athens and Delos at just the right time to see what was there, and, although we do not know for sure whether they were responsible for bringing works of art back to Cosa, they surely brought back tempting reports.

3. 2. 2. Early Imperial (30/20 BC-late 1st century AD)

The sack of Cosa in 70 BC was thorough. Parts of the town were burned – especially destructive in the residential blocks, where houses collapsed. After a period of abandonment lasting to ca. 30/20 BC, the town was resettled. E. Fentress has conducted a survey at regular intervals over the site to determine which residential blocks were reinhabited.⁷ These cluster around the *forum* and along Street N and include one block of atrium

¹ MARCADÉ 1969, 110, no. A4127, pl. xxxiv: a figure of 'Leto' from the House of the Five Statues on Delos who has her entire (missing) bust made separately in a similar fashion, although the flat attachment surface parallels the slope of her shoulders downward toward her lowered left arm. Another *comparandum*, closer in manner of piecing, is the 'Maiden from Chios' in Boston; see above, note 1 on p. 43. ² PEDLEY 1998, 205.

³ On this see *ibidem*.

⁴ MOLTESEN *et alii* 2000, 101-105. On Rome as a rising center of Hellenistic art in the 1st century BC see the surveys in POLLITT 1986, ch. 7, especially 162-163 and STEWART 1990, 228-231.

⁵ A penetrating treatment of this as well as the relationship between Hellenism and the increasing yen for luxury among Romans of the 2nd century BC is that of GRUEN 1992, chs. 2 and 3. An important recent study is that of MILES 2008, especially ch. 1 on plunder and ch. 3 on Cicero's views on the social place of art. PEDLEY 1998, 205 also gives a useful summary of this situation. Both Pedley and Miles take due note of the two shipwrecks of the first half of the 1st century BC whose cargoes contained works of art, the wreck off Mahdia in Tunisia and that near Antikythera. Both ships were sailing westward from Athens or Delos when they sank.

⁶ For bibliography see PEDLEY 1998, 205 and 208.

⁷ FENTRESS 1994, 208-222; also EADEM 2003, 32-34.

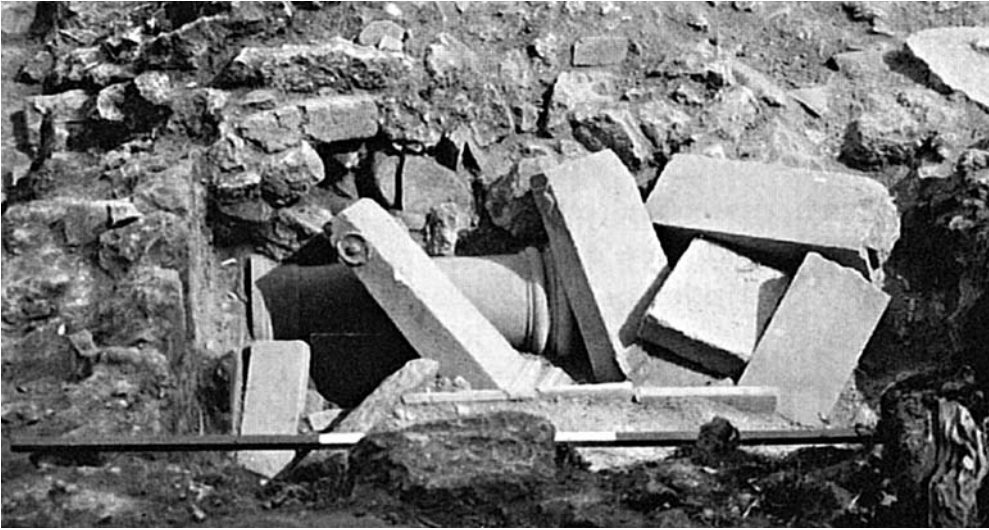


FIG. 19. Cache of furniture *in situ*. House of Diana
(photo after *Cosa v*, pl. 10, reprinted with permission of E. Fentress).

houses on one side of the broad Street ρ between *arx* and *forum* and some, though not all, of the atrium houses on the *forum*, including the House of Diana.¹ On Street \mathfrak{N} , the former House of the Salvii, mentioned above, was combined with the house next door to form a comfortable and well-appointed home with two *atria*, mosaic floors, and rooms with walls decorated in the Second Style. Arretine ware and other pottery found in one of the cisterns suggest an Augustan construction date and a floruit that lasted until the Flavian period.² Public buildings were repaired, notably the Capitolium, and, when the *basilica* collapsed in the earthquake of AD 51, a small *odeum* was built into its ruins. There is also evidence, primarily epigraphical, that an imperial cult existed at Cosa beginning under Augustus. This brief sketch should set the scene for the early imperial sculptures and furniture that were tested.

One of the three heads just discussed was found in the cache of furniture jumbled together inside the small garden shrine in the

House of Diana (FIG. 19). It must have been attached to a statuette of Diana depicted as a huntress with her dog, carved in Carrara marble, that was also found there (TABLES 1 and 3; CO11; FIG. 16, left).³ Epigraphic evidence confirms the dedication of the shrine to Diana,⁴ and the statuette served as its cult image in Neronian times. The head clearly does not belong to the body, for it fits neither the statuary type nor the statue itself, as the excavator has noted.⁵ Diana's original head must have broken at some time, possibly a victim of the earthquake of AD 51, and the new head substituted. The very worn and pitted surface of both Diana and her dog, as opposed to the fresher surface of the head, suggests that the statue was originally displayed outdoors in a garden before its reincarnation as a cult image. She wears a short chiton with an overfold over which is a nebris attached at her left shoulder, so as to leave her right arm free. A baldric crosses her body in the opposite direction, creating a criss-cross pattern of diagonals over her chest. This small group has no precise

¹ See the plan in FENTRESS 2003, fig. 14.

² BRUNO, SCOTT 1993, 161-188.

³ Taylor in FENTRESS 2003, 51 and 191-193 with pls. 78-79. Cosa, Antiquarium, Inv. C9603 (body), C9606-C9609 (body parts), and C9604 (dog).

⁴ Bodel in FENTRESS 2003, 45-51 on the inscription.

⁵ Taylor in FENTRESS 2003, 191.



FIG. 20. Bacchus from Shrine of Liber. Cosa, Antiquarium (excavation photo courtesy American Academy in Rome).

parallels. The quality of workmanship is provincial, though not without touches of originality since it is not a slavish copy of a known type.¹

Another statue of Carrara marble is a good example of the wide range of sculptor's capabilities when compared with the preceding figure. This is a half life-sized, headless figure of Dionysus discovered in the late antique Shrine of Liber Pater (TABLES 1 and 3; CO20; FIG. 20).² It was carved of an excellent grade of marble: pure white with a pleasing tonality, marred only by tiny specks of graphite. The superior quality of execution suggests a date in the early 1st century AD. The identity of the divinity represented is suggested by the vine-entwined tree-stump by his right leg and by its statuary type, that of a youthful Dionysus holding a thyrsus in his raised left hand and a *cantharus* in his lowered right. Traces of long, wavy locks remain on his chest. The statuary type has many variants executed in both bronze and marble. These reverse the ponderation, the raised and lowered arms, and the turn of the head from one type to another. They may present a more strictly Polyclitan pose or a more lissome, swinging Praxitelean pose, as seen here. The Cosa Dionysus turns his head in a direction opposite to that in which most figures in this pose do. This movement greatly enhances the three-dimensionality of the overall conception and encourages the spectator to view the figure from several angles – overall, a very Hellenistic idea. This statue encourages us to understand the works of Roman sculptors as eloquent reminders of their ingenuity and skill in producing works that appealed to the varied tastes of those wealthy Romans who desired small-scale statuary to embellish their homes and gardens. The statue must have originally stood on the edge of a portico overlooking a garden, to judge from the weathered condition of the feet and plinth, and not against a wall, in order to appreciate to the fullest its three-dimensional aspect.³

Also of early imperial date is a trio of statues, each executed in a different marble, that decorated the niches of a triple-bayed *scaenae frons* of the *odeum* that was built into the ruins of the *basilica* toppled by the earthquake of AD 51. Two approximately life-sized por-

¹ See Taylor in FENTRESS 2003, 55 for comments on the origin of the statue.

² COLLINS-CLINTON 1977, 49-50 and fig. 22; EADEM 2001.

³ For a more detailed study of this statue and its original setting see COLLINS-CLINTON 2001.



FIG. 21. Left: *Togatus* (Nero), right: draped female figure (Agrippina Minor). Cosa, Antiquarium (excavation photos courtesy American Academy in Rome).

trait statues of a man wearing a toga and a draped woman depicted as a priestess are a matched pair based on their size and style of carving (TABLES 1 and 3; CO26 and CO23 respectively; FIG. 21).¹ Their refined execution strongly suggests a date in the late Claudian or early Neronian period. Symptomatic of this date is the transparency of the garments over the legs of the figures. But only one has proved to be of Carrara marble: the *togatus*. Isotopic data identifies the marble of the female as Parian *lychnites*.

These two may be associated with a third statue on the basis of the proximity of their find-spots (TABLES 1 and 3; CO1; FIG. 22).² It is a fragment of a half-draped male figure discovered below the central niche of the *scaenae frons* of the *odeum*. This is represented in the 'hip-mantle' statuary type frequently used in Julio-Claudian portrait statuary to represent deceased personages in heroic semi-nudity. It

is carved with a rectilinear tenon extending from its underside; this is clearly intended to fit into a concavity in the top of a separately made lower body.³ I have recently published



FIG. 22. Fragment of torso of male figure (Claudius). Cosa, Antiquarium (excavation photo courtesy American Academy in Rome).

¹ COLLINS-CLINTON 2000, 109-117. Cosa, Antiquarium, Inv. CD610 (H. 1.245 m) and CD611 (H. as preserved 0.80 m) respectively.

² COLLINS-CLINTON 2000, 106-108. Cosa, Antiquarium, Inv. CD975 (H. as preserved 0.40 m).

³ The best comparison for visualizing the statuary type and this kind of attaching upper and lower bodies is a statue of Augustus from Thessalonica. See COLLINS-CLINTON 2000, 108 and fig. 6.

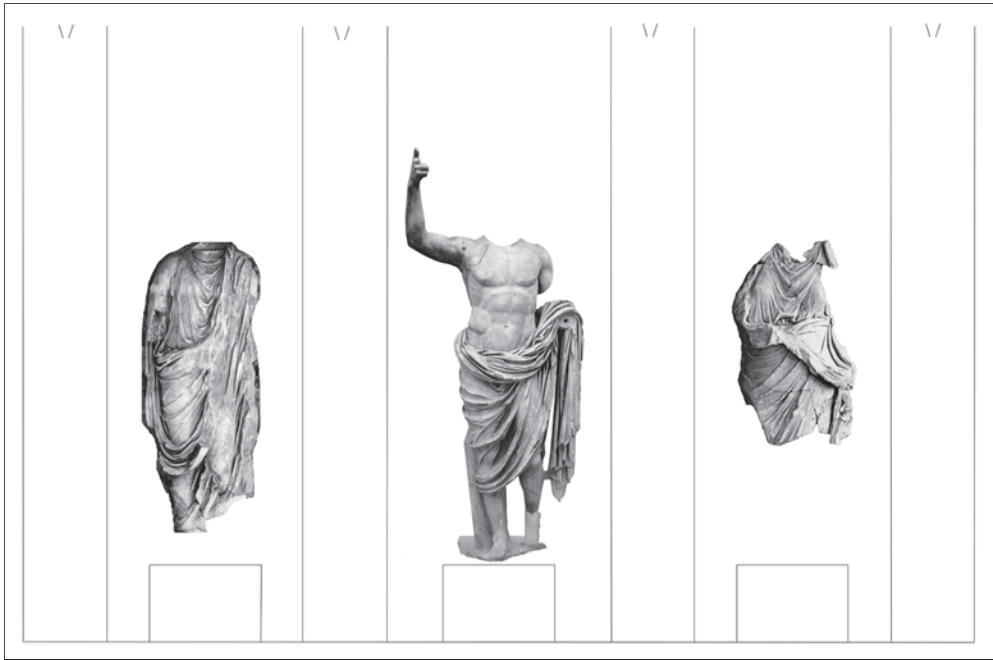


FIG. 23. Tentative reconstruction of the statues in the *scaenae frons* of the Odeum at Cosa, not to scale (photo J. Collins-Clinton).

the Cosa trio as a small Julio-Claudian dynastic group dedicated to the recently deceased and divinized Claudius flanked on his left by his widow, Agrippina Minor, in her capacity as priestess of his cult, and by his adopted son, Nero, now the new *princeps* (see reconstruction in Figure 23).¹ The fragment of 'Claudius' was carved from a block of Thasian dolomite, a third marble for this group and a marble still rare in Italy in the 50s AD. The sculptor of this torso has used to the best advantage the special qualities of this very hard and white marble to emphasize the smooth gradations in the musculature and the softness of the flesh. The use of three different marbles for each statue opens the question of why a different marble was used for each. Was there a hierarchy of value in the

choice of marble relative to the importance of the person represented? Or, could there have been another reason for commissioning the images of Agrippina and Claudius in expensive imported marbles? We know from brick stamps from a Julio-Claudian restoration of the Capitolium that a certain L. Titinius Glaucus Lucretianus, an individual apparently active in tile-making and the marble industry at Luna and who led a distinguished public life there, was responsible for the work. Inscriptions from Cosa also record his name. He may well have wished to ingratiate himself to the court of Nero by dedicating these statues in fine marbles, and it appears from his activities at Cosa that his efforts succeeded, for he left Cosa to begin his career in Luna.²

¹ COLLINS-CLINTON 2000, 117-123. In the reconstruction the statue of Augustus from Thessalonica, with Augustus' head removed, stands in for Claudius. A fragmentary inscription attests to the restoration of the *basilica* by Nero with his own money soon after the quake and before Claudius' death two years later; COLLINS-CLINTON 2000, 102-103, and FENTRESS 2003, 56-58. The statues must have been executed after Claudius' death.

² E. Fentress has presented the evidence of his work at Cosa, the brickstamps and the inscriptions especially, and has analyzed his career in some depth; she suspects that the House of Diana may have been his residence at

Another statue made of the coarser grained Parian marble from the Lakkoi quarries is the torso of an over life-sized seated male figure in the basic statuary type of Jupiter Capitolinus, the cult image made by Apollonios in gold and ivory for the for the Sullan rebuilding of the Capitolium in Rome after the fire of 83 BC (TABLES 1 and 3; CO17; FIG. 24).¹ It was a popular statuary type for Julio-Claudian emperors, often used in connection with the imperial cult, as may have been the case here. The choice of a Parian rather than Carrara marble befits this use.² Its discovery in a medieval wall on the *arx* indicates only that the statue was most likely set up nearby. The *pronaos* or forecourt of the Capitolium would be a very likely place for its original display.

This figure sits rather more rigidly upright than most of the examples of the type, which tend to bend toward the lowered and extended right hand, usually holding a globe or a bundle of thunderbolts. The musculature of chest and abdomen form a schematic pattern of horizontal depressions crossing the vertical median line. The figure wears a heavy mantle across his back. It sweeps diagonally in broadly rendered folds from his left shoulder down to his right hip, where it passes to the front of the body. The vertical break down the proper left side and the upright position render it difficult to judge whether his left arm was raised or lowered or whether the mantle hung down that side, covering



FIG. 24. Seated male figure in the guise of Jupiter Capitolinus. Cosa, Antiquarium (photo D. Attanasio).

the arm, or whether it looped over the shoulder and hung down the back. The calm symmetry in the anatomy preserved on both sides of the axis suggests that both arms were lowered, and the bit of drapery beside the neck seems to take a diagonal direction

Cosa because of the many pieces of marble furniture collected to decorate the garden in the most up-to-date manner; see FENTRESS 2003, 55-62. She notes that the garden furnishings are all carved in Carrara marble. We now know that at least one, a herm, is Pentelic, but it alone is not enough evidence to contradict her conclusions that this material «suggest[s] a close acquaintanc[e] with marble-producing regions» (62). I think it is entirely appropriate to consider that the furnishings in Carrara marble were made in Luna.

¹ COLLINS 1970, 69-75 and fig. 15; otherwise unpublished. Cosa, Antiquarium, Inv. CA8; H. 0.75 m. Found built into a medieval wall around the *arx* just north of the main entrance. Separately attached head, lower body, and drapery at back missing. Broken away are most of proper left side, right arm near armpit, and front of neck. The head was fixed to the neck by an iron dowel, whose hole is visible in the break; the attachment surface preserved in the neck is finished smooth at a point roughly corresponding to the level of the chin. The underside of the torso has an undulating, convex surface, lower in front than behind, for setting into the lower half of the statue; this surface is worked with a claw chisel. The torso is further secured to the legs by a large rectangular dowel extending upward into its broken left side. The surface of the back along the proper left side and bottom is rabbetted for attachment of the missing drapery and arm. Its surface is finished with the point and claw chisel. In the area corresponding roughly to the proper left breast are the remains of a rectangular dowel hole.

² On the relationship between the choice of marble and its symbolic and social value, see POLLINI *et alii* 1998; see also E. Moormann's electronic review of C. C. MATTUSCH, *The Villa dei Papiri et Herculaneum: Life and Afterlife of a Sculpture Collection*, Los Angeles, J. Paul Getty Museum, 2005, available at <http://bmc.brynmawr.edu/2005/2005-07-58.html>. From another point of view, see FANT 2002, 309-315, where he notes that the furnishings in the garden of the House of the Vettii in Pompeii were clearly arranged to show off those in Greek mar-



FIG. 25. Cuirassed figure. Cosa, Antiquarium (photo D. Attanasio).

more in keeping with covering that shoulder and arm, as in the figure of Claudius from Leptis Magna,¹ than in forming a loop on the shoulder.

As stated above, the torso belongs to that group of seated imperial portrait statues representing Augustus and other Julio-Claudian (and occasionally later) emperors in the guise of Jupiter.² These are based in general upon Hellenistic representations of the seated Zeus or Jupiter, such as the late Republican Jupiter Capitolinus mentioned above. The many variations in the placement of the arms and in the draping of the mantle over the upper body and legs make it difficult to trace the group as a whole to a specific Greek prototype. Maderna in her study of these statues, however, notes that 33 of 45 pieces agree in raising their left arms while holding a sceptre and lowering their right arms; they tend to drape their mantle so as to form a loop drooping on their left shoulders.³ The Cosa figure sits in a less active pose than most examples of this group and lowers both arms, thus presenting a more classicizing spirit, which could indicate an Augustan date. The workmanship is cold and lifeless. The drill, though used to render the folds of the drapery, is nowhere obvious. The nude surfaces were originally smoothed, although now roughened by weathering.

An over life-sized imperial portrait statue wearing a cuirass executed in Carrara marble illustrates an advantage of marble testing most useful in an archaeological context – that of reuniting non-joining pieces of the same sculpture separated by events of the later history of the site (TABLES 1 and 3; CO15; FIG. 25).⁴ The style of carving, the iconography of the decorations on the breastplate,

ble. This assumes that the owners felt that the imported marbles were recognizable by visitors; indeed, when the sun shines onto the garden, the translucency of those pieces is obvious (personal observation on site, J. C.-C.).

¹ Tripolis, Museum. Found on the Speaker's Platform of the 'Old Forum'. See MADERNA 1988, 191-192, no. JT43, pl. 6.2, with bibliography.

² On this group of portrait statues and its association with Zeus/Jupiter see most recently MADERNA 1988, 24-52, 164-193 nos. JT1-45, and pls. 5-15, with earlier bibliography.

³ MADERNA 1988, 27-32; the Cosa figure should fall into a small sub-group in which the position of the arms varies, 189-193, Cat. nos. JT40-45. Ultimately the Phidian Zeus lies behind them all.

⁴ COLLINS 1970, 76-85 and figs. 16-18; otherwise unpublished. Cosa, Antiquarium, Inv. CC549. H. 1.20 m. Found just to west of Temple D on the *arx*, built into the medieval wall. Its separately worked head, right arm, and front portion of proper left forearm and hand are missing. Its right leg broken away at hem of tunic, the left below the knee. Much of fall of *paludamentum* is gone. Joining surfaces of both arms heavily battered; front edge of neck socket chipped; upper back across shoulders and surface of proper right side below arm battered away. Large chip in *pteryges* in region of proper right buttock; folds of tunic below that chip also badly chipped. Tips of *pteryges* in bottom row across front mostly chipped away. Front surface of cuirass corroded and worn, especially relief decoration of cuirass and *pteryges*. Socket for inset head roughly picked. End of oval dowel hole preserved in proper right shoulder; only the roughly picked floor of oval socket remains for attachment of proper left forearm.

and the type of cuirass suggest a date in later Julio-Claudian, or possibly Flavian, times. We also tested a right foot with a joining lower leg whose size and footgear appear to suit this statue (TABLES 1 and 3; CO4; FIG. 26): could they possibly belong together?¹ Macroscopically the marble of both pieces appears the same: fine-grained, streaked with grey, dotted with tiny black specks of graphite – not a good grade of sculptural marble. Testing verified that the pieces do belong together, even though they were all discovered in different places. The scattering of marbles that belong to the same statue points to the post-antique history of the site, for there were medieval occupations both in the *forum* and on the *arx* ranging from the 6th century AD to the early 14th century.²

This statue is essentially unpublished, although it is known to those scholars who work with cuirassed statuary types, beginning with the comprehensive studies of C. C. Vermeule.³ I cannot here present it more fully, but essential descriptive and iconographic details are in order. The type of cuirass, or body armor, is the anatomical form that originated in Greek classical times. It fell out of favor during the Hellenistic period and was reintroduced under Augustus.⁴ The Cosa statue is an example of a type that features two or three rows of hinged, metal lappets attached to the lower edge of the armor, both front and back, and falls into a small sub-type with three rows of lappets. The top row has small, semi-circular ones, below which fall two rows of longer ones. All are decorated in low relief with vegetal motives and figural images. The Cosa cuirass features all lion's heads in the top row, archaizing Jupiter Ammon heads alternating with what may be very decorative thunderbolts in the second row; the third row contains two alternating types



FIG. 26. Foot and leg of cuirassed figure. Cosa, Antiquarium (photo J. Collins-Clinton).

of vegetal ornament. The cuirass with three rows of lappets is closely related to, and probably descends from, the cult image of Mars Ultor created for his temple in the Forum of Augustus in Rome, dedicated in 2

¹ COLLINS 1970, 77, fig. 17, otherwise unpublished. Cosa, Antiquarium, Inv. nos. CB15 (foot) and CD188 (lower leg). Total H. of the two together 0.442 m. The foot was found at entrance to *forum* at northwestern end near surface, and the leg near back left corner of *basilica*, also near surface. They did wander! An inset, smoothly cut bedding replaced the heel of foot, perhaps for ancient repair (?). Both pieces weathered and chipped. Most of plinth beneath foot broken away.

² There was even a lime kiln in front of the Capitolium in the Middle Ages.

³ VERMEULE 1959, 54, no. 176, pl. XIII fig. 43, also mentioned on p. 44 under no. 82; see also HANFMANN, VERMEULE 1957, 247, n. 196; STEMMER 1978, 170, no. 120; Stemmer in BOL 1992, 370. All cite an incorrect inventory number, copying the original error of Vermeule.

⁴ See the comments of GERGEL 2006, 452-453.

bc.¹ The type has been used to represent local dignitaries as well as emperors, as was the case with the statue of Marcus Holconius Rufus from Pompeii.²

The Cosa statue belongs to K. Stemmer's Type VII in its stance and manner of arranging the *paludamentum*. He stands with his weight on his left leg, as the vertical folds of the tunic covering that thigh show. His missing right arm was raised. The *paludamentum* is worn looped over the left shoulder with one end wrapped around the left forearm so that it falls down the side of the leg. The right foot, which we can now be certain belongs to this statue, wears the *calceus senatoris* instead of the military boot.³ The cuirass has the usual *gorgoneion* below the neckline, and the shoulder flap is decorated with a small figure wearing a *chlamys* who strides toward the right bearing a club (?) on his left shoulder. The main decoration consists of two winged Victories wearing long chitons heraldically placed on either side of a flaming *thymiaterion*. They throw incense on the flame with their outstretched right hands while holding a bowl in their left.⁴ Below the navel is a calyx of acanthus leaves from which spring scrolls that wind their way left and right and up the sides of the breastplate. Below the acanthus calyx hangs a palmette. The decoration of the breastplate is almost identical to a statue in the Louvre that may be Flavian.⁵ Despite their worn condition the decorative elements still preserve remnants of the careful, sharp-edged rendering found in these Neo-Attic designs on cuirasses of the period from Augustan through Flavian times. Noteworthy is the delicacy in rendering the fluttering drapery and transparency of the skirts of the Victories; the scrolls moving up the sides of the breastplate tend to be more common in the

later end of the chronological scale. On the breastplate the drill is used very sparingly and mainly to articulate the eyes and mouths of the lions' heads. The rest is done with fine chisel work. In the drapery the drill is used more extensively in rendering the deep channels between folds in the tunic and *paludamentum*. Here, the workmanship seems heavy-handed and uninspired. The unfinished back indicates that the statue was meant to stand against a wall or in a niche. Despite the discovery of the torso on the *arx* and its large size and weight, the possibility that it may have originally stood in the *forum*, where the pieces of the foot were found, must not be ruled out.

4. CONCLUSIONS [J. C.-C.]

The provenancing of these white marbles from Cosa has revealed some useful archaeological applications in addition to identifying the quarry of origin of the raw material, since, as we know, certain white marbles resemble each other macroscopically. Reinforcing the visual association of two or more pieces with each other when they do not join or were not found near each other is one such application that is especially important in an archaeological setting as disturbed by later settlements as Cosa has been. In addition, the identification of the Greek marbles used at Cosa yields important information about their distribution, at least in finished products, in Roman towns in Italy outside Rome. Archaeology has not shown the existence of sculpture workshops in Cosa, and we have assumed that this material was made in Rome or Luna in Italy or abroad and shipped to Cosa, presumably by sea.

Identifying the source of these marbles has also raised some questions. Can we say

¹ On this see GERGEL 2006, 453 where he states that the image of Mars Ultor was a «unique classicizing creation of the Augustan age». A well-known marble copy is in the Capitoline Museum in Rome, Helbig⁴, 2, 46-48, no. 1198 (E. Simon), and STEMMER 1978, 140-141.

² Naples, Museo Nazionale Archeologico, Inv. 6233. See BONIFACIO 1997, 34-38, pls. 3-4, and ZANKER 1998, 109-112, especially 112, and fig. 58. This statue reflects the honorific title of *tribunus militum a populo* bestowed upon him by Augustus.

³ Although we might think that *calcei* would be more appropriate for private citizens, Roman emperors do wear them occasionally; see STEMMER 1978, 58-59, Cat. no. V 4. M. Holconius Rufus of Pompeii wears *calcei*.

⁴ On this motive see STEMMER 1978, 155 with n. 651; the Cosa example belongs to his Type A.

⁵ Paris, Louvre, Magazine, Inv. 1067; see most recently STEMMER 1978, 7, n. 17.

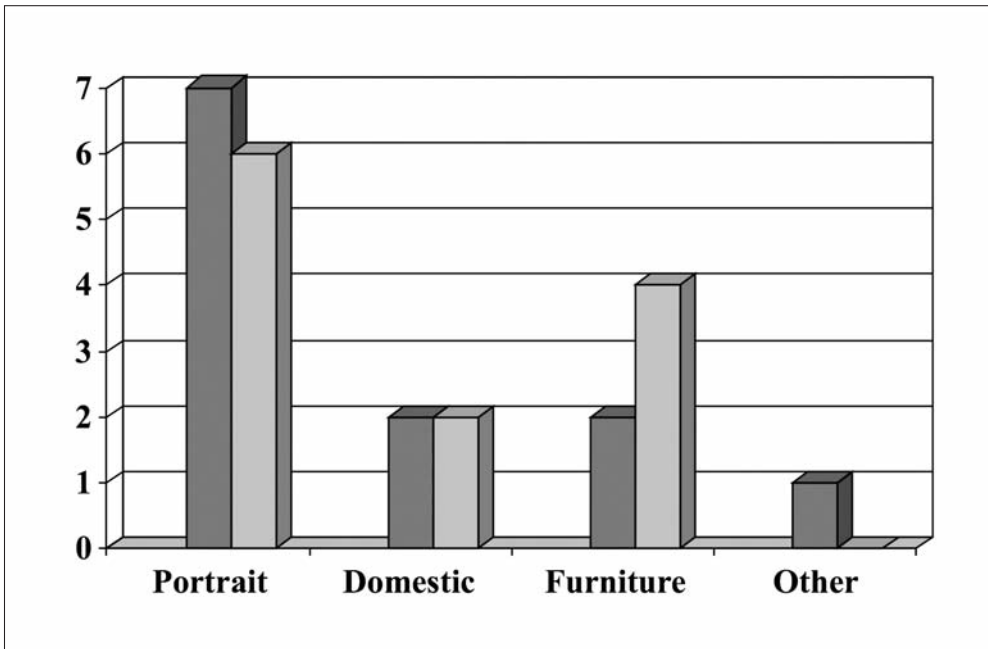


FIG. 27. Categories of sculpture in Carrara (dark grey) or Greek (grey) marbles.

for certain that the choice of marble for imperial portraits, whether Italian or Greek and if Greek, whether Parian *lychnites*, Parian Lakkoi, Pentelic, or Thasian, reflects a correlation between the commercial value of the marble and the social standing of the person represented or of the dedicator? Figure 27 shows the significant categories of sculpture with how many were carved of Carrara or Greek marbles. Of the five large portrait statues that have survived, three are of Greek marbles, suggesting that such a correlation existed at Cosa. Of the two in Carrara marble, the cuirassed figure is of a poorer grade; this could indicate affordability as a factor in determining the choice of marble at the time of its commissioning, or, simply availability. As for the domestic sculpture and furniture, the data, though close, lean toward the Greek marbles. What is the significance of this? The three heads once belonging to statuettes may have been carved of Parian marble and exhibit stylistic affinities with pieces from Delos. Tantalizing in this connection is the discovery of late 2nd century BC amphoras from Cosa on Delos and in the Agora of

Athens. How extensive were the trade relations between Cosa and the eastern Mediterranean at this time? As explained above, the Cosan amphoras were made by the wealthy Sestius family enterprise. Though not found in their original contexts, could the Pentelic pieces have been imported directly to Cosa at that time from Athens? Many find-spots for this category of material are so disturbed that we cannot be sure whether the pieces in Greek marble were Hellenistic imports arriving during Cosa's late Republican phase of overall prosperity, or whether they were made by Greek artisans who established workshops in Rome in the 1st century BC and worked with their preferred marble, or whether they were created by Greek workshops in Italy in the early Imperial period when Cosa was undergoing a brief *renovatio*. In this regard, bearing in mind Pedley's observation that small-scale sculpture and furnishings made in early Imperial times would most likely have been made of Carrara marble, those in Greek marble from Cosa were most likely late Hellenistic/late Republican in date and not Imperial.

In conclusion, it seems to me that the most valuable function of provenancing the marble sculpture from Cosa lies in two areas. First, the presence of marble sculpture in the public and private spheres of a town is an index of its prosperity and the wealth of individual families residing there. Overall I have been struck by the high proportion of small-scale domestic sculpture and furniture in marble relative to the small population of the town in both late Republican and Augustan and Julio-Claudian times. Well-to-do families residing at Cosa before ca. 70 BC were obviously aware of the place of marble sculpture and furnishings in the décor of the Hellenistic house. In addition, in comparison with contemporary Pompeii, the non-elite housing at Cosa saw the same enlargement of some older courtyard houses and construction of others with *atria* in the early 1st century BC.¹ As at Pompeii, this must-signal increasing wealth not just among the elite families of the town. Cosa was clearly part of this trend.² During the Augustan and later revival, one wonders about the extent to which some of these were reused, scavenged from the late Republican ruins, or whether some were new purchases. Could new works indicate the beginning of a growth-spurt at that time, which ceased by the end of the century for whatever reason? This short-lived increase in prosperity is reflected in the building projects both in the town and in the port in Augustan and Julio-Claudian times, after the difficult period of the mid-1st century BC and after the earthquake of AD 51. Second, since Cosa is a small Roman town with limited periods of prosperity, the embellishment of its public and private spaces with marble sculpture and furniture is correspondingly limited in both space and time. These delimited parameters mean that this material is easily comprehensible as a whole for the entire town as excavated and is representative of the ways in which sculpture from different marble provenances was used in a typical Roman town.

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¹ BRUNO, SCOTT 1993 and FENTRESS 2003, 14-23 on the Late Republican housing.

² JONES, ROBINSON 2004.

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LORENZO LAZZARINI · L.A.M.A. (Dip. di Storia dell'Architettura),
Università I.U.A.V., San Polo 2468, I 30125 Venezia, tel. + 39 041 2571413, -459,
fax +39 041 2571434, e-mail: lorenzo@iuav.it

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Casella postale n. 1, Succursale n. 8, I 56123 Pisa,
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