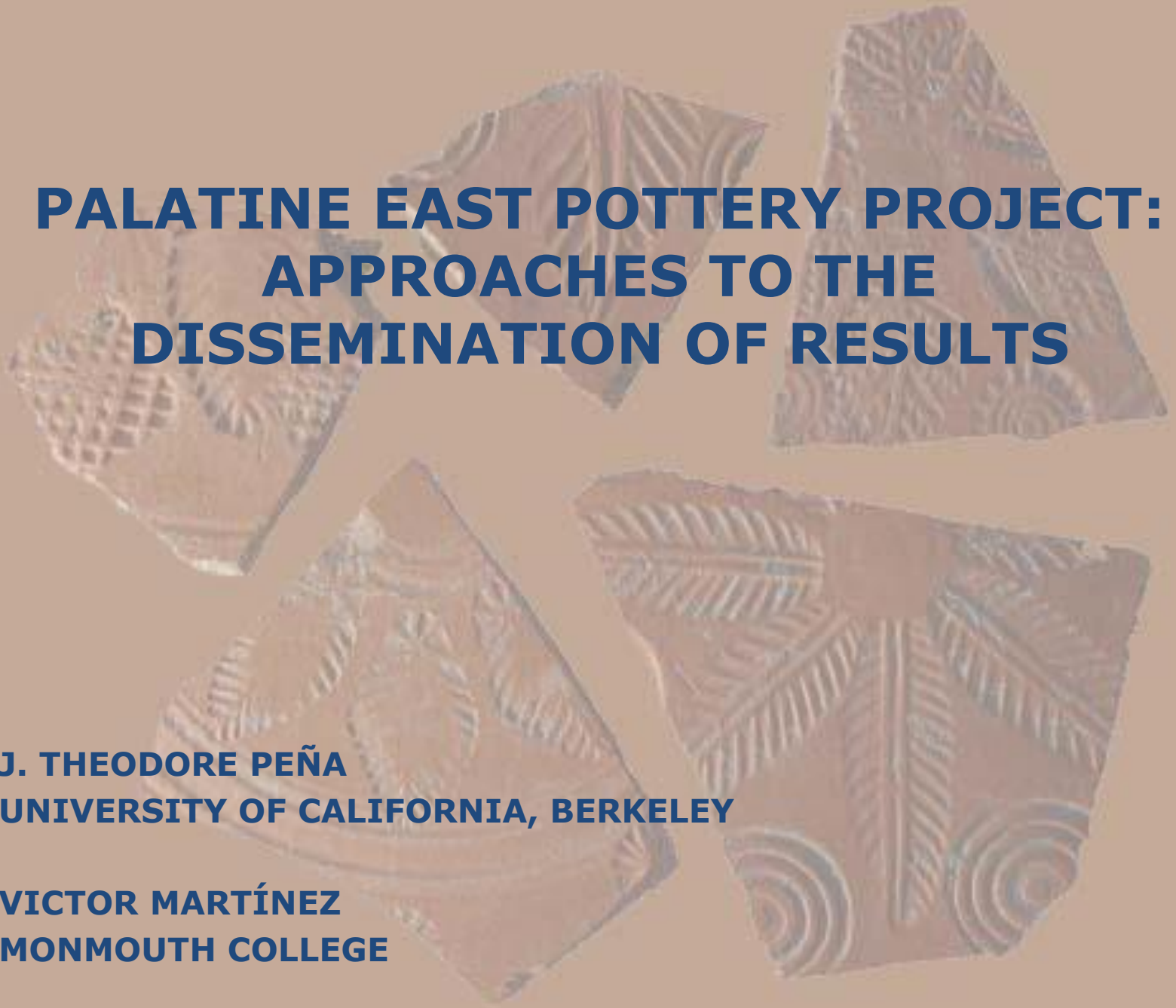
PALATINE EAST POTTERY PROJECT: APPROACHES TO THE DISSEMINATION OF RESULTS



J. THEODORE PEÑA
UNIVERSITY OF CALIFORNIA, BERKELEY

VICTOR MARTÍNEZ
MONMOUTH COLLEGE


© 2014 Google
Google earth
1943
33 T 291818.32 m E 4640658.10 m N elev 22 m eye alt 280 m

Soprintendenza Speciale per i Beni Archeologici di Roma
American Academy in Rome

PALATINE EAST EXCAVATIONS

by

Eric Hostetter - J. Rasmus Brandt

Volume I

De Luca Editori d'Arte

Soprintendenza Speciale per i Beni Archeologici di Roma
American Academy in Rome

PALATINE EAST EXCAVATIONS

by

Eric Hostetter - J. Rasmus Brandt

Volume I

De Luca Editori d'Arte

Soprintendenza Speciale per i Beni Archeologici di Roma
American Academy in Rome

PALATINE EAST EXCAVATIONS

by

Archer St. Clair

Volume II

De Luca Editori d'Arte

The Urban Economy during the Early Dominate

Pottery evidence from the Palatine Hill

J. Theodore Peña

BAR International Series 784
1999

APPENDIX 3:

TECHNIQUES FOR MEASURING THE ECONOMIC VALUE OF POTTERY

eby obtaining an estimate for
presented by the examples of
ry, the efficiency ratio method
since once one has derived the
e application of this method
ttforward operation. Further,
s the advantage of remaining
breakage rate and vessel
In practice, however, it is
more of the amphora classes
factured in identical or highly
ccount impossible to assign a
to a specific class. As a result,
generally conflates materials
erent amphora classes. The
ratio method is thus highly
t the capacity method was the
racterization of the amphora
it.[3]

ity data were available in the
ses present in the A (105)
nt of additional capacity data
puter program that calculates
drawing using an electronic
question, developed by Senior
ng a vessel profile into a series
ating the volume of each, and
top and bottom of each conic
king points along the vessel
. Trials run by Senior and
with a sufficient number of
ighly accurate estimate of a
esent study, vessel capacity
profile drawings published in
re taken using photocopies of
Each photocopy was first
rtion had occurred in the
was then mounted on the
measured three times using a
g at the lip.[5] The results of the
order to obtain an estimate of
e capacity measurement was
a classes represented in the A
ample of one additional class
for that vessel's effective
literature was by no means
s effort would no doubt yield
itable for measurement.

APPENDIX 2:

FABRIC CLASSIFICATION

This appendix presents detailed descriptions of the various pottery fabrics attested in the A (105) deposit. Each description includes both a hand specimen and a microscopic characterization of the fabric (abbreviated hsp and mic, respectively). The former represents what the observer sees when examining a fresh fracture surface with the naked eye, while the later represents what the observer sees when examining a fresh fracture surface with the aid of a binocular microscope having a maximum magnification of 40x.

The 51 different fabric descriptions are arranged in eight different fabric groups, each of which represents a distinct type of ceramic body from a mineralogical point of view. Within each fabric group the various fabrics have been arranged (to the extent possible) in an order that runs from finest to most coarse. This approach serves to suggest the relations between the various fabrics at the materials level, while facilitating the use of the classification as an identification key. The symbol * is employed to denote fabric descriptions that are based upon a limited number of examples. For these, readers should keep in mind that the characterization of additional pieces might lead to some significant modification of the description. Equations with other fabrics described in the literature are indicated in cases where these can be made with a fair degree of confidence. In every case, the reader should keep in mind that as the identifications of the various minerals, rock fragments, and other aplastic materials were made without the benefit of petrographic analysis, these should be regarded as no more than informed conjectures.

The system employed for the characterization of fabrics is loosely based on that described in Stienstra (1986). Fabrics are considered to have three components: matrix (transformed clay minerals and aplastics too small to resolve visually using the 40x binocular microscope), macrograins (aplastic materials large enough to resolve visually using the 40x binocular microscope), and voids. The following attribute categories and values are employed:

1. hardness. Values: soft (scratched with fingernail), slightly soft, hard (normal range for Roman pottery), very hard (notably hard); friable (crumbly).

2. touch. Values: rough, powdery, soapy.

3. fracture surface. This refers to the texture of areas freshly exposed by a break. Values: smooth, slightly gritty, gritty, coarse, very coarse; hackly.

4. break.. This refers to the condition of the edge of the fracture surface. Values: sharp, regular, irregular.

5. color.. Color is characterized using the Munsell Soil Color Charts alphanumeric system, with values interpolated between color chips as appropriate.

5. surface coating. Types: slip (presumably made from same clay as paste), color-coat slip (distinct color from body, implying different clay), gloss (distinctly glossy color-coat slip), glaze (a true glaze), salt scum (layer of salt deposited on surface during drying).

7. surface coverage.. Values: even, uneven; matte, slightly glossy, glossy.

8. fabric texture. Values: fine (slight to no notable macrograin component), porphyritic (sparse macrograins in fine matrix), me-dium-grained (frequent-abundant, small-medium macrograins), coarse (frequent-abundant, small-large macrograins).

9. macrograin concentration. Values: absent, rare (ca. 1 percent), sparse (ca. 3-5 percent), frequent (ca. 10 percent), abundant (ca. 20 percent), very abundant (ca. 30 percent).

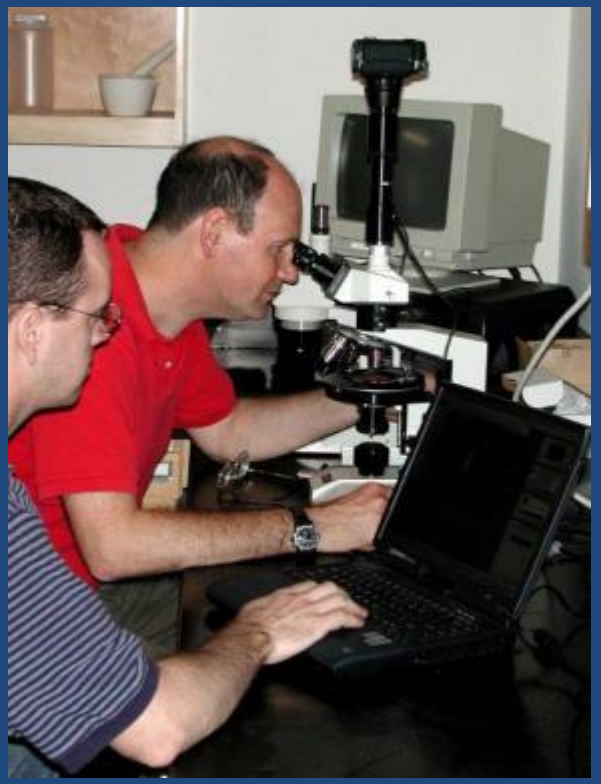
10. macrograin size. Values: minute (<ca. 0.3 mm), small (ca. 0.2-0.4 mm), medium (ca. 0.3-0.6 mm), large (ca. 0.5-1.0 mm), very large (>ca. 1.0 mm).

11. macrograin shape. Values: angular, subangular, subround, round; tabular, blocky, irregular, platey, book.

12. macrograin type. Values: grain (i.e., mineral grain), rock fragment, plate (for mica), body (type unclear).

The provenience suggestions at the end of each fabric description are based upon the discussions of the various pottery classes presented in Sections 2.4-6.


PEPP



Late Roman African Cookware of the Palatine East Excavations, Rome

A holistic approach

Janne P. Ikäheimo

BAR International Series 1143
2003

The forming and slipping of African Sigillata: evidence from the Palatine East assemblage

J. Theodore Peña

J. THEODORE PEÑA

ASPECTS OF RESIDUALITY IN THE PALATINE EAST POTTERY ASSEMBLAGE

POT CALLING THE KETTLE BLACK?
CLASSIFYING RE-FIRED ROMAN COOKING POTS

JANNE P. IKÄHEIMO

TO IMITATE OR TO SPECIALIZE?
AFRICAN IMPORTS AND THE PRODUCTION OF DOMESTIC COOKWARES IN ROME AD 50-550

Janne P. Ikäheimo

Abstract: *In order to assess the importance of cookingware production in the environs of Rome over the period from AD 50 to AD 350, the effect of African cookingware imports on domestic production is examined through the study of a large assemblage recovered in the excavations of a late Roman domus on the north-eastern slope of the Palatine Hill. The results depict a versatile and adaptive craft that persisted under external pressure through a variety of production strategies. On a more general level, the production of the imitations shows how components of material culture, even everyday kitchen utensils, became increasingly uniform*

IKÄHEIMO & PEÑA: THE PALATINE EAST POTTERY PROJECT: A HOLISTIC APPROACH

THE PALATINE EAST POTTERY PROJECT: A HOLISTIC APPROACH TO THE STUDY AND PUBLICATION OF AN EXCAVATED POTTERY ASSEMBLAGE FROM ROME

[1]J.P. Ikäheimo – [2]J.T.Peña

[1]Academy of Finland, c/o Institute for Cultural Research, University of Helsinki, janne.p.ikaheimo@helsinki.fi
[2]Department of Classics, University at Buffalo - State University of New York, tpena@buffalo.edu

Abstract: *This paper presents an overview of the methodological procedures being employed by the Palatine East Pottery Project to study and publish the 12 tons of Roman pottery recovered in the Palatine East Excavations in Rome. By combining traditional and innovative procedures used for the classification, characterization, quantification, and presentation of the materials dated to ca. AD 50–450/500, the final result of the project will represent a methodologically ambitious exposition of a large pottery assemblage spanning nearly the entire period of the Roman Empire.*
Keywords: *Roman pottery, processing, recording, quantification*

INTRODUCTION

The Palatine East Pottery Project (PEPP) is an archaeological initiative aimed at studying and publishing the ca. 12 metric tons of Roman-period pottery recovered in the Palatine East Excavations carried out on the northeast slope of the Palatine Hill, near the Arch of Constantine, in downtown Rome (**Fig. 1**). Between 1989 and 1995 the Palatine East Excavations uncovered the remains of an early third-century AD structure in brick-faced concrete (*see Hostetter et al. 1990; 1993; 1994; Hostetter & Brandt 2003*), probably to be identified as a storehouse.

The Palatine East Excavations produced large deposits of pottery dating to the period running from the middle of the first century AD to the second half of the fifth century AD. In the course of the excavations, the pottery from the site, assigned to four general functional categories (tablewares, utilitarian wares, cookwares, and amphorae), was subjected to a standardized set of study procedures. First, the pottery from each stratigraphic unit (context) was washed, set out in screens to dry, and subjected to an initial chronological evaluation. Then, it was sorted into the standard classes, wares and amphora classes, recognized in the literature and subjected to basic quantification involving two measures: weight and number of sherds.

PEPP is employing a combination of traditional and innovative methods for the classification, characterization, and quantification of this material and the presentation of its results. The results will constitute a methodologically ambitious exposition of an unusually large assemblage of material that will shed important light on patterns in the consumption of pottery and the array of amphora-borne foodstuffs (wine, olive oil, processed fish products) in the city of Rome over nearly the entire course of the Imperial period. This paper provides a general overview of the battery of methods being employed by PEPP.

FABRIC CLASSIFICATION AND ANALYSIS

For the purposes of PEPP, a fabric is defined as a ceramic body produced using a distinct set of raw materials (base clay, tempering material, and/or surface coating) and/or paste preparation/surface coating practices. Differences in fabrics between and among classes presumably reflect differences in raw materials and paste preparation practices, and may represent distinct geographical areas and/or manufacturing traditions.

The study of fabrics is begun with a general overview of a specific class with the aim to identify the various fabrics represented by examining breaks and surfaces with the naked eye, and the fracture surfaces of small detached chips under a binocular microscope. Two fabric descriptions employing a standardized set of attributes and attribute values are composed for each identified fabric: one for hand specimens, in other words, sherds viewed with the naked eye, and one for examples viewed under low magnification (e.g., *Ikäheimo 2003: 17–22*). A reference card is prepared by gluing chips from several sherds that represent the range of variation attested within a fabric onto a note card for convenient viewing under a microscope (**Fig. 2**).

Each fabric is assigned a temporary number in a numerical range defined by the general nature of the raw materials employed in its manufacture (e.g., 000-099: calcareous body with fine quartz and sometimes mica; 100-199: calcareous body with fine/medium quartz and calcareous rock fragments; 200-299: calcareous body with volcanic material; etc). Grouping fabrics in this way serves to suggest fabrics that may be closely related to one another, for example, two fabrics that originate in the same geologic region.

The quantitative analysis of Roman pottery: general problems, the methods employed at the Palatine East, and the supply of African Sigillata to Rome

J. Theodore Peña

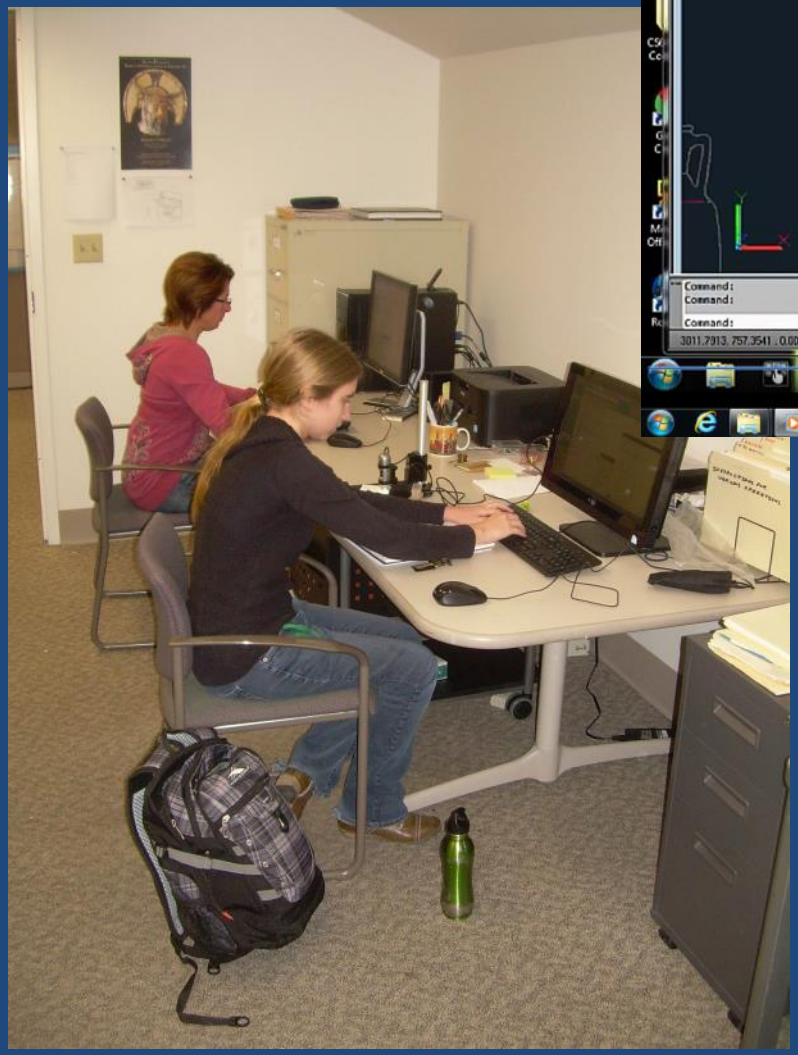
A notable current in Roman archaeology over the past 30 years has been the effort to elucidate the economic rôles of the various regions of the empire through the analysis of their pottery exports. This work has involved qualitative investigations aimed at identifying and describing the various wares and amphora classes that were exported beyond their area of manufacture, determining the general regions or specific locales where these were produced, establishing the chronology of their production, and reconstructing the extent of their distribution in specific time-periods. It has also involved the quantification of pottery assemblages from consumption sites with a view to comparing the amounts of pottery and/or amphora-borne foodstuffs from different regions consumed at one specific site during a particular period, comparing patterns of consumption at two or more different settlements during a single time period, and/or tracing patterns in consumption at one or more settlements over time. Yet while the discipline has registered much solid progress on the qualitative side, the same cannot be said for the quantitative side. The quantitative analysis of pottery assemblages raises substantial problems of both a theoretical and a practical nature that researchers have for the most part been unwilling to recognize and address. As a result, the validity of most quantitative studies of Roman pottery assemblages, particularly meta-analyses involving the combination of data-sets produced by two or more different projects, remains open to serious question.

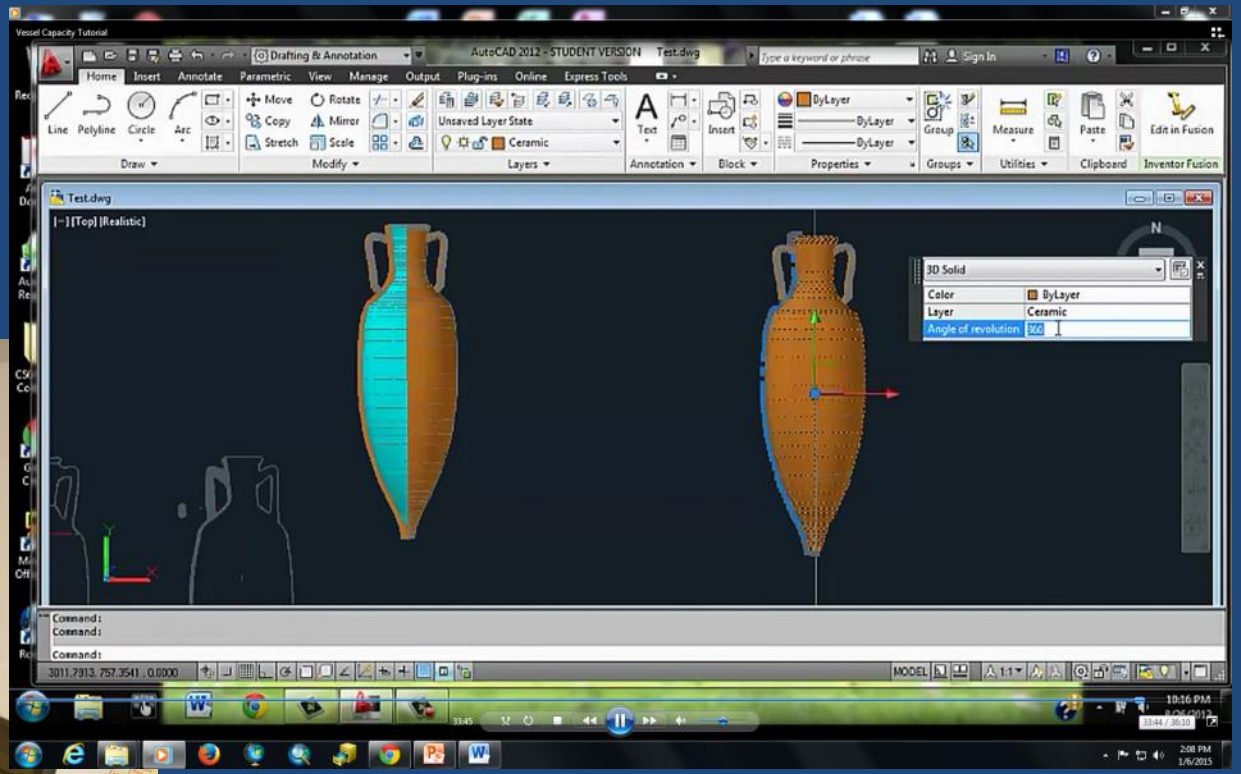
The aim of this article is to contribute to the construction of a methodologically sound approach to the quantitative analysis of Roman pottery assemblages, first by describing the various theoretical and practical problems associated with this kind of work, then by illustrating ways in which research can be designed and carried out with a view to accommodating them. For the second of these two purposes, discussion focuses on the description of the methods currently being employed for the quantification of the pottery assemblage from the Palatine East excavations in Rome, illustrating how these perform by considering a data-set pertaining to African Sigillata.

Theoretical and practical problems in the quantitative analysis of pottery assemblages

The quantitative analysis of pottery assemblages must address theoretical and/or practical problems in 4 distinct areas: the collection of the pottery destined to be the object of analysis, its classification, its subsequent quantification, and interpretation of the resulting data. For ease of discussion, these four areas are henceforth referred to as collection, classification, quantification, and interpretation.

With regard to collection, it is important to recognize that the methods employed for the recovery of pottery (either in an excavation or in surface collection) determine the make-up of the resulting assemblage to an extent that may be significant from the point of view of quantitative analysis. Since Roman pottery regularly breaks into extremely small pieces (i.e., pieces in the granule size-range, using the terms employed in the Wentworth scale), in practical terms it is impossible to recover all of the pottery present either in a stratigraphic unit or on the ground surface. The directors must therefore either formulate some set of protocols regarding what sorts of potsherds of what size to collect and then enforce those rules, or forego doing so, leaving it to the discretion of individual supervisors, excavators, field-walkers, etc. Whatever the approach adopted, the pottery assemblages that represent the object of quantitative analysis represent just a subset of the entire set of materials that was, in theory at least, susceptible to collection. While I am aware of no data-set that demonstrates the impact that specific collection protocols (or their absence) may have on the nature of pottery assemblages, the assumption that this may prove significant seems reasonable, and some effort should therefore be made to identify and take into account the effects of collection protocols when consid-

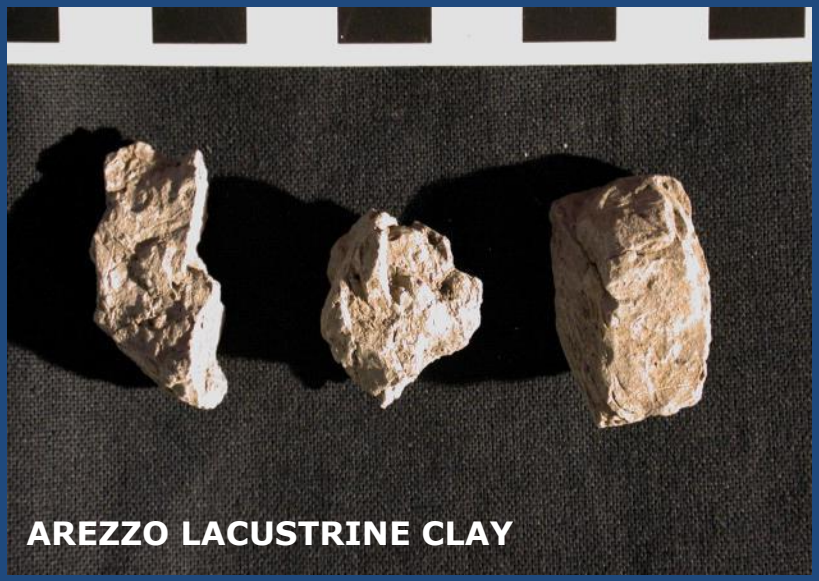



Vessel Capacity Tutorial
AutoCAD 2012 - STUDENT VERSION Test.dwg
Drafting & Annotation
Home Insert Annotate Parametric View Manage Output Plug-ins Online Express Tools
Line Polyline Circle Arc
Move Rotate Copy Mirror Stretch Scale
Unsaved Layer State
Ceramic
ByLayer
Text Insert Group Measure Paste Edit in Fusion
Draw Modify Layers Annotation Block Properties Groups Utilities Clipboard Inventor Fusion
Test.dwg
[-][Top][Realistic]
3D Solid
Color ByLayer
Layer Ceramic
Angle of revolution 360
Command:
Command:
Command:
3011.7913, 757.3541 , 0.0000
MODEL
10:16 PM
2:08 PM
1/6/2015

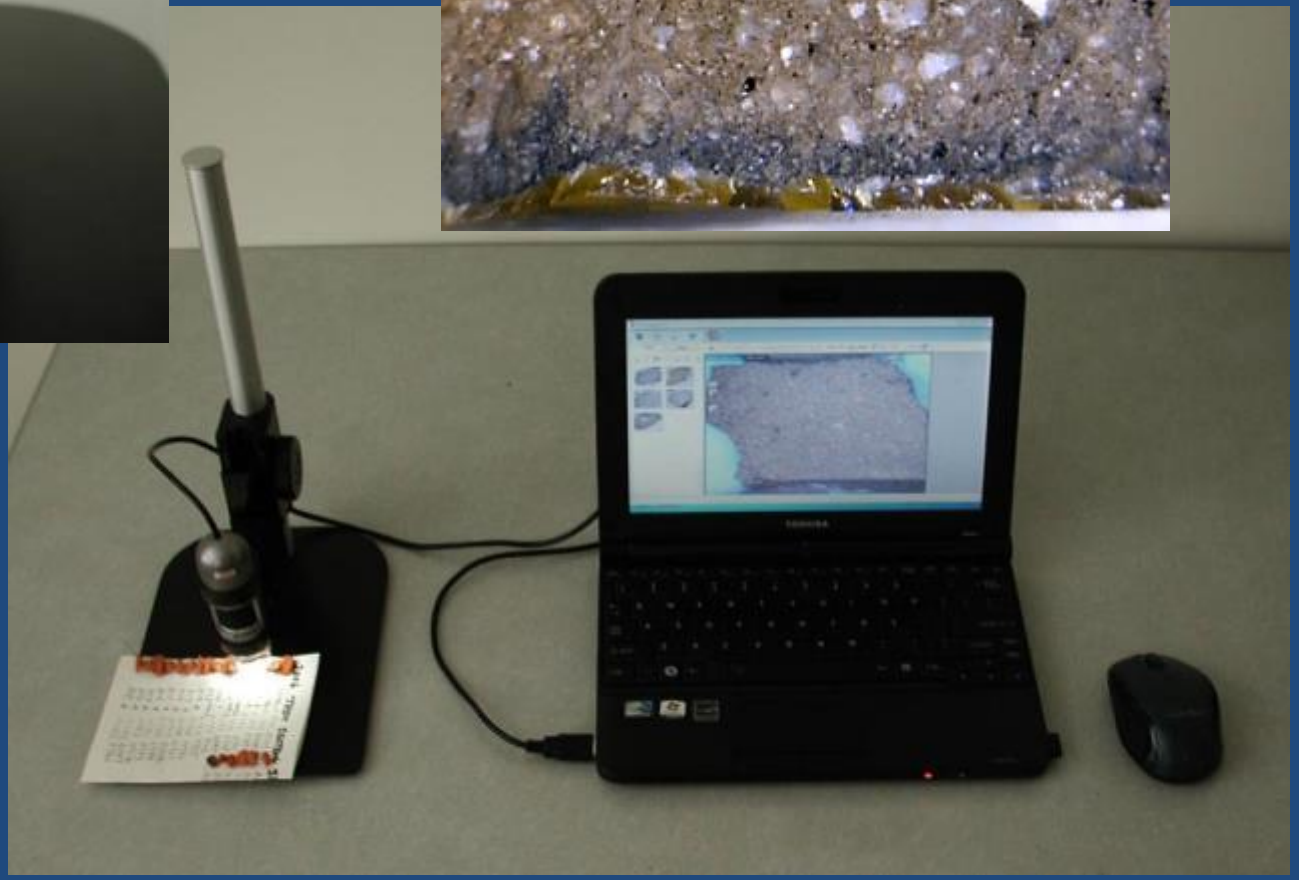
ITALIAN SIGILLATA 1

ITALIAN SIGILLATA 2

ITALIAN SIGILLATA 3



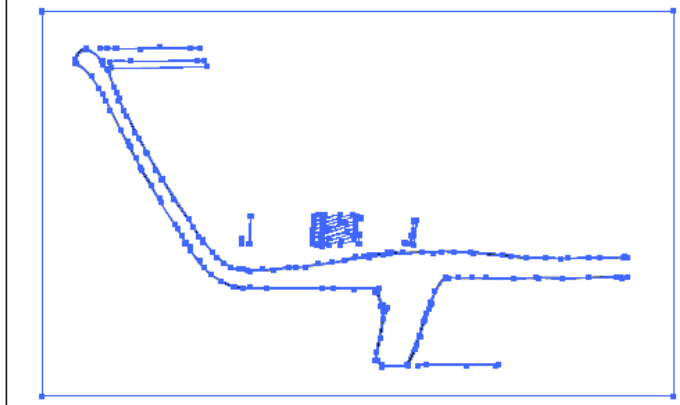
AREZZO LACUSTRINE CLAY

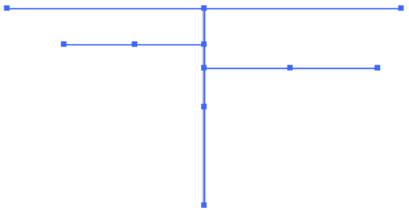


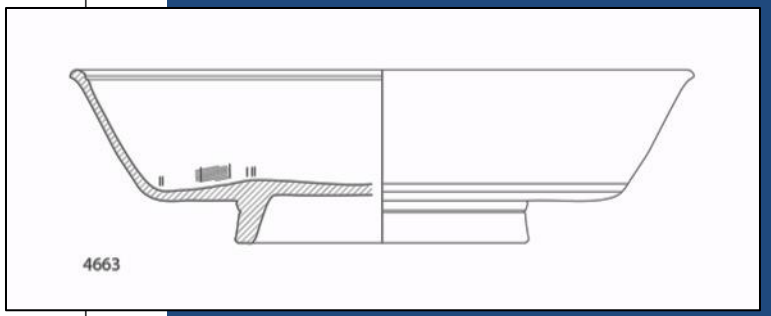
Adobe Illustrator - [Untitled-1 @ 100% (CMYK/Preview)]

File Edit Object Type Select Filter Effect View Window Help

Group Fill: Stroke: Brush: Opacity: 100 % Style:







DISSEMINATION OF RESULTS

PRESENTATION OF LOW-LEVEL DATA AND ANALYSIS ON WEB ON ROLLING BASIS

PUBLICATION OF FINAL SYNTHESIZING MONOGRAPH IN ON-LINE OPEN-ACCESS FORMAT

RES ROMANAE : UNIVERSITY OF CALIFORNIA, BERKELEY ROMAN MATERIAL CULTURE LABORATORY

Welcome to ***RES ROMANAE***, the website of the University of California, Berkeley Roman Material Culture Laboratory. ***RES ROMANAE*** serves as the portal for reporting the results of the activities of the UC Berkeley Roman Material Culture Research Group (BROMACREG), an informal consortium of faculty, graduate students, and undergraduate students interested in the investigation of the material culture of the Roman world, broadly defined. ***RES ROMANAE*** presents profiles of the various members of BROMACREG, a description of the UC Berkeley Roman Material Culture Laboratory facility, primary data from various research projects directed by the members of BROMACREG, publications and other products authored by these individuals in downloadable format, a directory of resources relating to the study of Roman material culture both on the UC Berkeley campus and further afield, and announcements regarding events on the UC Berkeley campus relating to the study of Roman material culture.

Search

DEPARTMENT OF CLASSICS, 73089 Dwinelle, University of California, Berkeley , BERKELEY, CA USA

OAC
Online Archive of California

Home | Browse Institutions | Browse Collections | Browse Map | About OAC | Help | What is OAC?

Welcome to the Online Archive of California

Search OAC

go

Browse the Collections

By Title from A to Z

0-9 A B C D E F G H I J K L M N
O P Q R S T U V W X Y Z

By Institution

Thousand Oaks Library
Tobacco Control Archives, UC San Francisco
Tulare County Library. Annie R. Mitchell History Room
UC Berkeley
- Art History/Classics Library
- Bancroft Library
- Berkeley Art Museum/Pacific Film Archive
- Bioscience and Natural Resources Library
- Davis (Harmer E.) Transportation Library
- Environmental Design Archives
- Ethnic Studies Library
- Hearst (Phoebe A.) Museum of Anthropology
- Institute for Research on Labor and Employment Library
- Institute of Governmental Studies Library
- Law Library

Browse Map

Need to Find a Digital Image?

A world of primary source materials is available to you online.

calisphere

WEB PRESENTATION

WARES (CLASSES)

DEPOSITS

SIGILLATAS AND RELATED CLASSES		
WESTERN	**AFRICAN**	**EASTERN**
Italian Sigillata 1	African Sigillata A	Eastern Sigillata A 1
Italian Sigillata 2	African Sigillata A/C	Eastern Sigillata A 2
Italian Sigillata 3	African Sigillata A/D	Eastern Sigillata A 3
Italian Sigillata Unidentified 1	African Sigillata C	Eastern Sigillata B 1
Italian Sigillata Unidentified 2	African Sigillata C/E	Eastern Sigillata B 2
Middle Adriatic Sigillata	African Sigillata D 1	Eastern Sigillata C 1
Tiber Valley Red-Slip Ware	African Sigillata D 2	Eastern Sigillata C 2
South Gallic Sigillata 1	African Sigillata D 3	Late Roman C 1
South Gallic Sigillata 2	African Sigillata E	Late Roman C 2
Narbonne Gray Sigillata	African Sigillata Unidentified 1	Cypriot Sigillata 1
Hispanic Sigillata	African Sigillata Unidentified 2	Cypriot Sigillata 2
	African Sigillata Unidentified 3	Pontic Sigillata

CLASS	PROVENIENCE	FABRIC
Italian Sigillata 1	Arezzo/Cincelli; perhaps other locales in N. Tuscany	013
Italian Sigillata 2	Tiber Valley; Rome area; perhaps locales in N. Tuscany	014
Italian Sigillata 3	Volcanic area (Puteoli?)	606

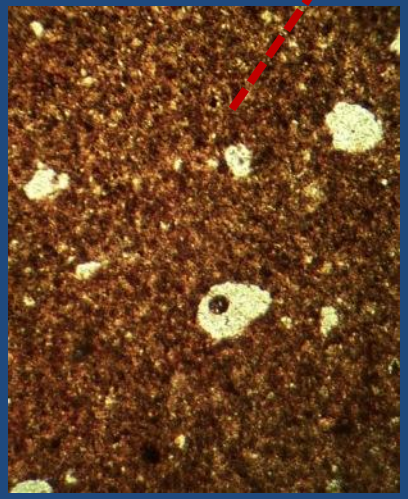
FABRIC: 013 - ITALIAN TERRA SIGILLATA 1

Provenience: Arezzo/Cincelli; perhaps other locales in northern Tuscany

Hand specimen: hard to very hard with a sharp break and smooth sub-conchoidal fracture surfaces with no visible inclusions, usually light red (2.5YR 6/6, 2.5YR 6/8) and occasionally yellowish red (5YR 7/6), with typically even and glossy red slip on both interior and exterior (10R 4/6, 10R 4/8, 2.5YR 4/6, 2.5YR 4/8).

Magnified X20: fine fabric; compact matrix, sometimes with sparse, small, round whitish (calcium carbonate) inclusions or reaction rims; sometimes with rare, minute to small, colorless grains (quartz); sometimes with sparse, small, round or lenticular voids.

Composition: Thin Section 2 Thick Section 2 Chip 92 NAA 3

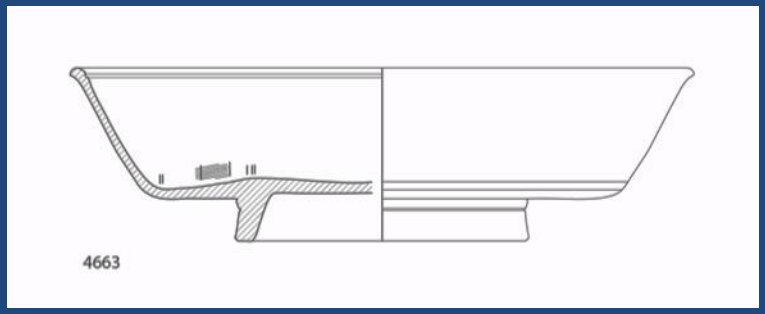


SPEC	CA	K	NA	SR	LA	SM	LU	CE	CO	CR	CS	EU	FE	HF	ND	RB	SC	TA	TH
IS46	17.7	0.99	1.95	330	28.0	4.66	0.28	58.4	10.0	88.8	4.05	1.06	3.32	5.56	0.00	58.6	11.5	0.88	7.26

ITALIAN SIGILLATA 1		
CATEGORY	PEPP FORM	CONSPECTUS FORM
Bowl	140	8
″	141	9
″	143	3 or 8
″	174	-
Dish	220.01	3
″	226	41
″	243	12
″	244	18
″	246	20
″	281	15
Closed	500.01	-
Cup	803	17
″	804	22
″	805	805
″	809	809
″	812	34
″	814.01	36
″	815	37

ITALIAN SIGILLATA 1 (continued)		
CATEGORY	PEPP FORM	CONSPECTUS FORM
Cup	817	44
″	820	26
″	821	32
″	823	39
″	833	22, 23, or 24
Chalice	881.01	52/R1-2, 4-10
″	890	R1-10
″	891.01	R1-4, 4-10
″	891.02	R1-3
″	892.01	R2-4
″	893	R3
″	895	R5
″	898.01	R8-9
″	899	R9
Miniaturizing	993	-

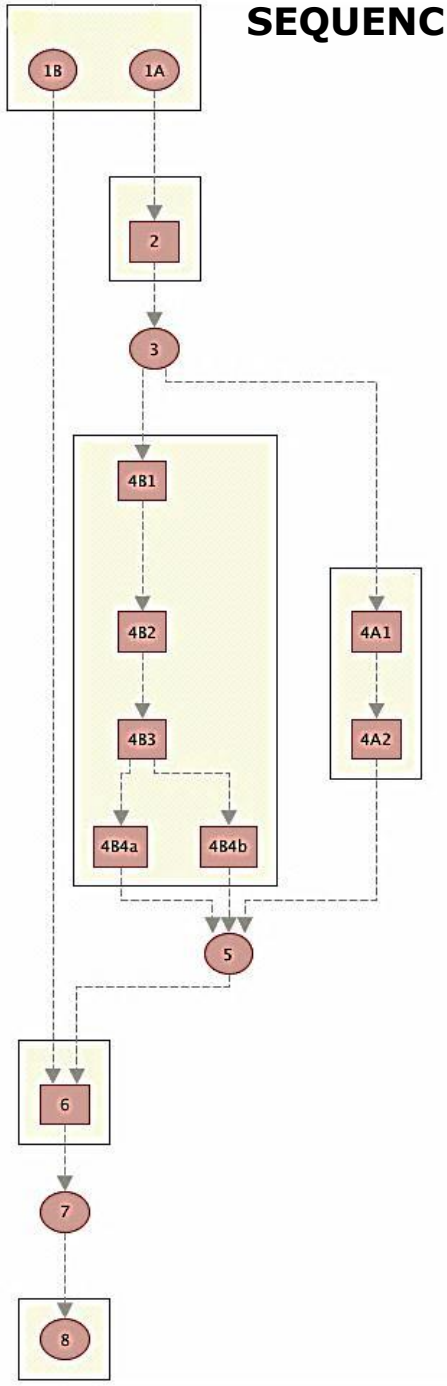
FORM 220.01



MANUFACTURING OPERATIONS

1A. PASTE PREPARED
1B. SLIP PREPARED
2. BLANK THROWN ON WHEEL
3. BLANK PARTIALLY DRIED
4A1. BLANK REMOUNTED ON WHEEL RIGHTSIDE UP
4A2. LOWER WALL AND BASE TURNED
4B1. BLANK REMOUNTED ON WHEEL UPSIDE DOWN
4B2. INTERIOR SMOOTHED AND SHAPED
4B3. GROOVES CUT IN WALL AND FLOOR
4B4a. CHATTERING CUT IN FLOOR
4B4b. MAKER'S STAMP IMPRESSED IN FLOOR
5. VESSEL DRIED
6. VESSEL SLIPPED
7. SLIPPED VESSEL DRIED
8. SLIPPED VESSEL FIRED

SEQUENCE



1. RAW MATERIAL PREPARATION
2. PRIMARY FORMING
3. DRYING
4A. SECONDARY FORMING (EXTERIOR)
4B. SECONDARY FORMING/ DECORATION (INTERIOR)
5. DRYING
6. SURFACING
7. DRYING
8. FIRING

(#4663, PED 89, 117, 204, and 219)

Twenty-six fragments (for the most part joining) of dish (form as Conspectus 3.3.2) preserving ca. one-half of rim and all of base, including entire profile except middle of floor.

Diameter rim 29; diameter base 13; height 8.1.

EVE rim: 57; EVE base: 100; weight (partial): 584.

Fabric 013. Light red (10R 6/6) body, with very glossy red (2.5YR 4/8) slip on interior, exterior of wall, and portion of outer face of foot.

Floor preserves edge of maker's stamp (apparently *in planta pedis*) at center, then has pair grooves, single groove, and another single groove, with band of chattering beginning at third groove and overlying fourth; small ridge at transition from lower to middle wall; broad groove immediately below rim.

Interior surface smooth, with faint medium facets on middle/upper wall. Exterior surface has light gouges and striations, with medium facets at transition from middle to lower wall. Large pad of clay on exterior surface middle wall that overlies gouges and striations.

Frequent lime spalls on interior on floor and lower wall; slip missing from substantial portion outer face of rim.

Drawing	Photos	Chip	Thin section	Thick section	NAA
X		X	X	X	

(#4663, PED 89, 117, 204, and 219) **ACCESSION NUMBER AND CONTEXT**

Twenty-six fragments (for the most part joining) of dish (form as Conspectus 3.3.2) preserving ca. one-half of rim and all of base, including entire profile except middle of floor. **GENERAL DISCRIPTION**

Diameter rim 29; diameter base 13; height 8.1. **DIMENSIONS**

EVE rim: 57; EVE base: 100; weight (partial): 584. **QUANTITATIVE DATA**

Fabric 013. Light red (10R 6/6) body, with very glossy red (2.5YR 4/8) slip on interior, exterior of wall, and portion of outer face of foot. **FABRIC AND SURFACING**

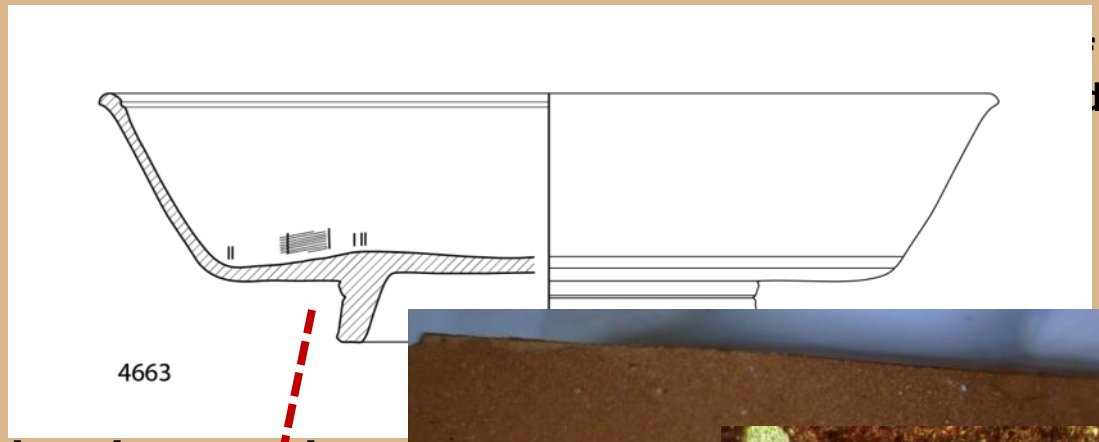
Floor preserves edge of maker's stamp (apparently *in planta pedis*) at center, then has pair grooves, single groove, and another single groove, with band of chattering beginning at third groove and overlying fourth; small ridge at transition from lower to middle wall; broad groove immediately below rim. **MORPHOLOGICAL DETAILS**

Interior surface smooth, with faint medium facets on middle/upper wall. Exterior surface has light gouges and striations, with medium facets at transition from middle to lower wall. Large pad of clay on exterior surface middle wall that overlies gouges and striations. **MICROMORPHOLOGY/MANUFACTURE**

Frequent lime spalls on interior on floor and lower wall; slip missing from substantial portion outer face of rim. **USE ALTERATION**

Drawing	Photos	Chip	Thin section	Thick section	NAA
X		X	X	X	

(#4663, PED 89, 117, 204, and 219)



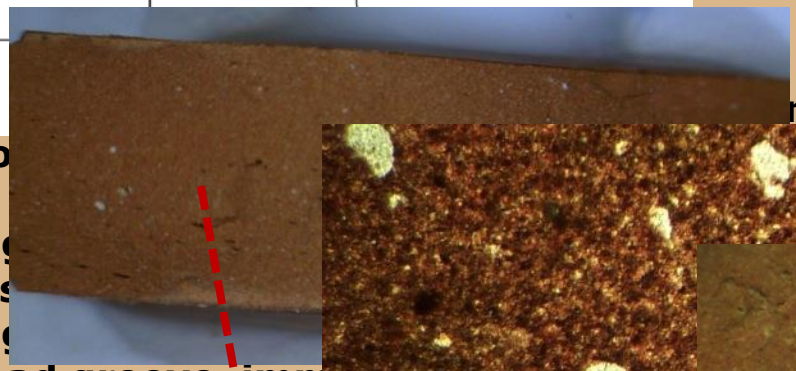
dish (form as Conspectus 3.3.2)
ding entire profile except middle

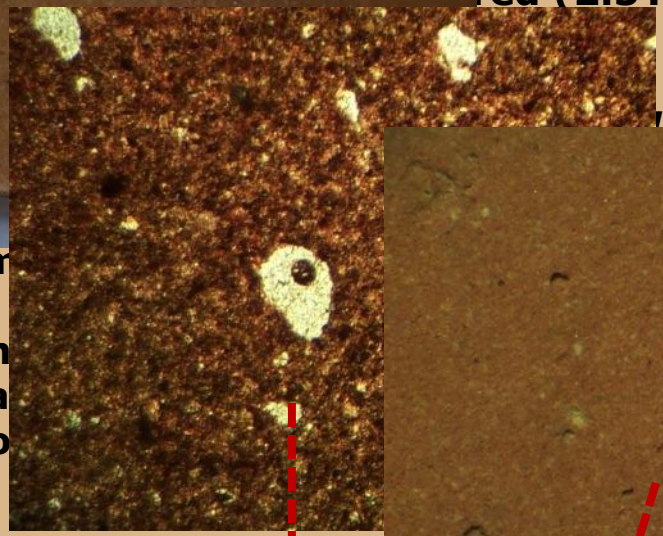
red (2.5YR 4/8) slip on
interior, exterior o

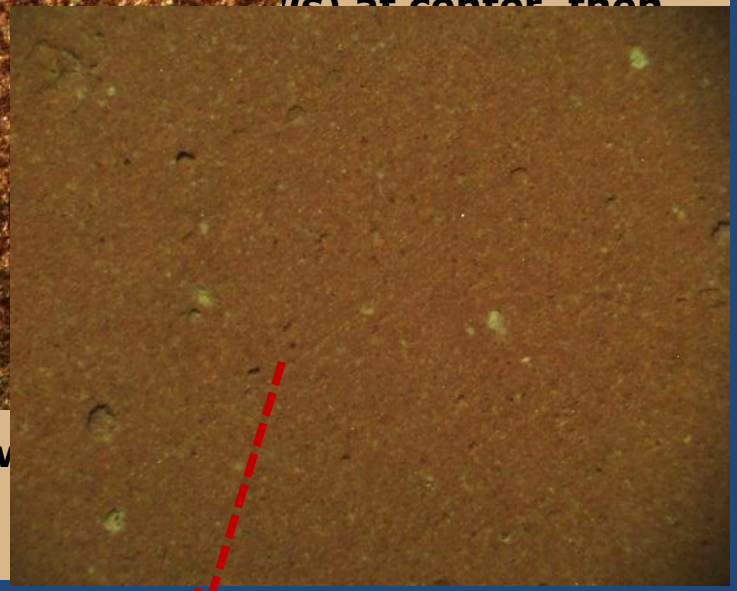
Floor preserves edg
has pair grooves, s
beginning at third g
to middle wall; broad groove imm

Interior surface smooth, with fain
surface has light gouges and stria
middle to lower wall. Large pad o
gouges and striations.

Frequent lime spalls on interior on floor and lower w
substantial portion outer face of rim.



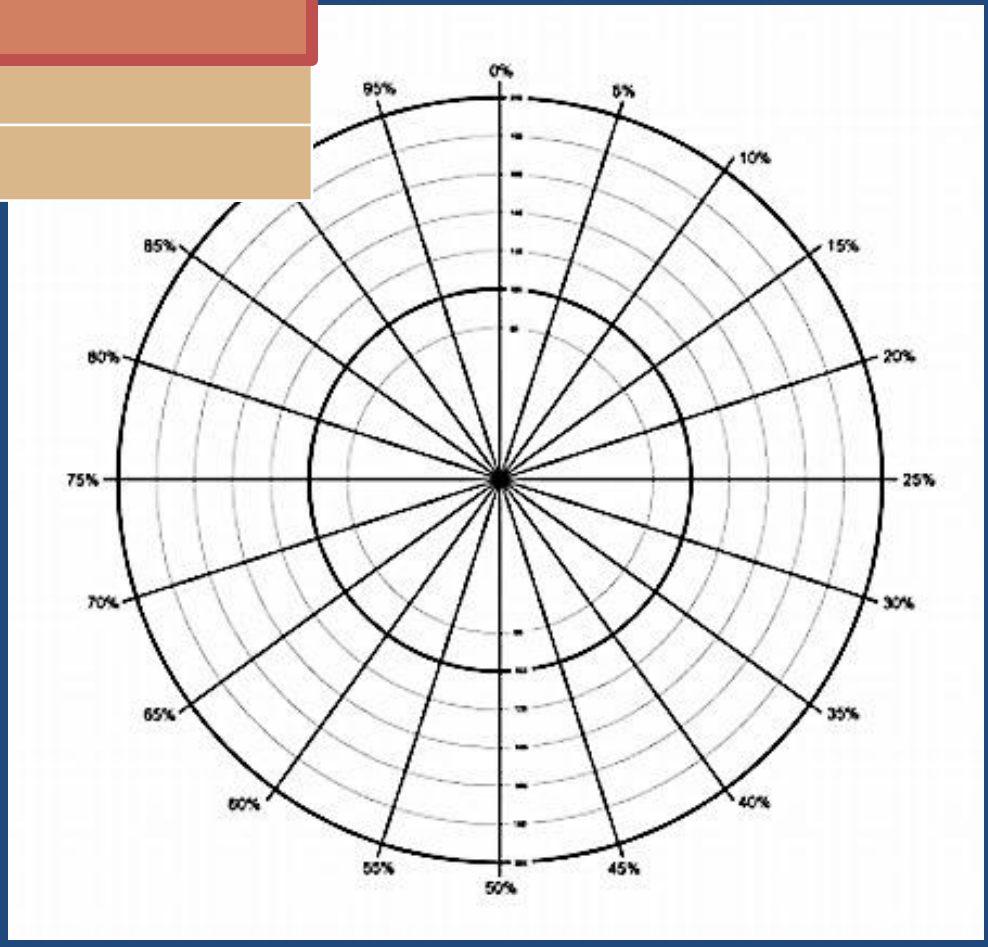


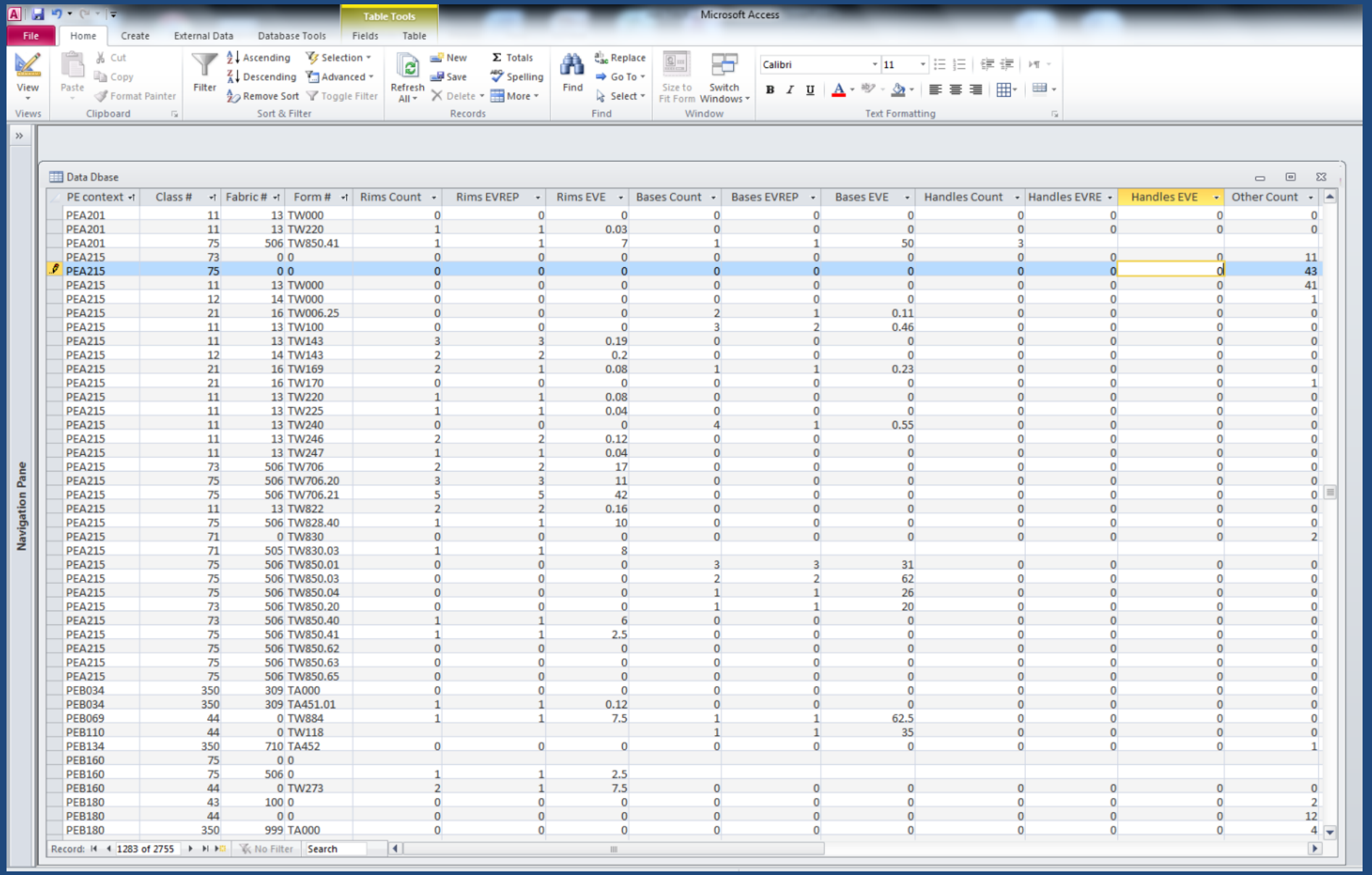


Drawing	Photos	Chip	Thin section	Thick section	NAA
X		X	X	X	

QUANTITATIVE MEASURES

- SHERD COUNT
- WEIGHT
- EVREP (= ESTIMATED VESSELS REPRESENTED)
- EVE (= ESTIMATED VESSEL EQUIVALENTS)
- MANUFACTURING COST
- AMPHORA CAPACITY

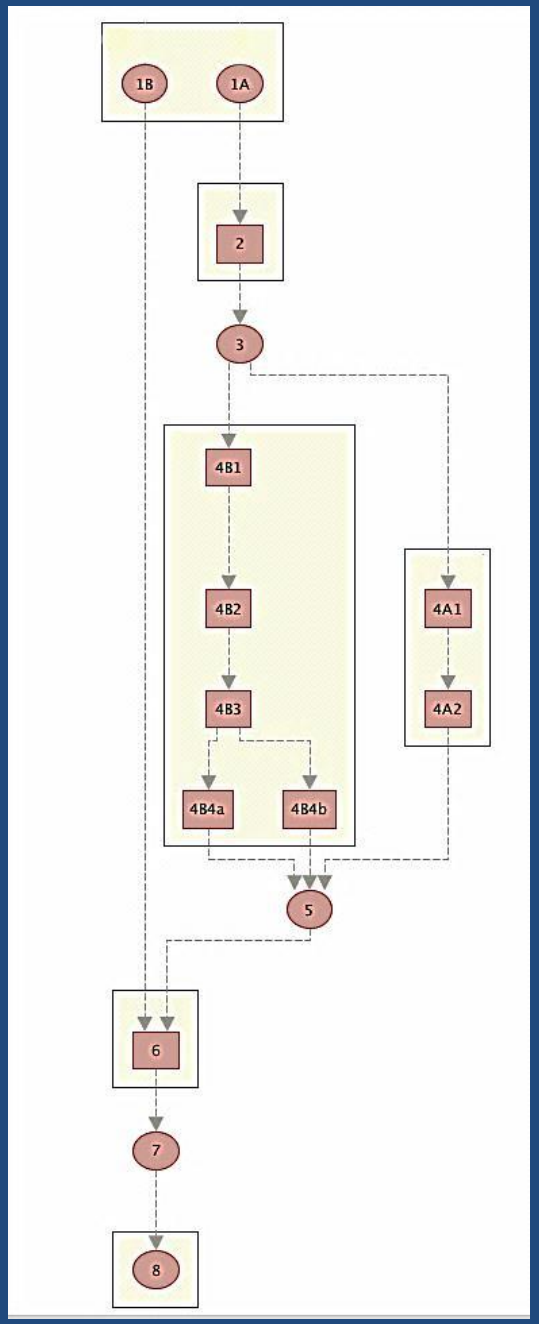


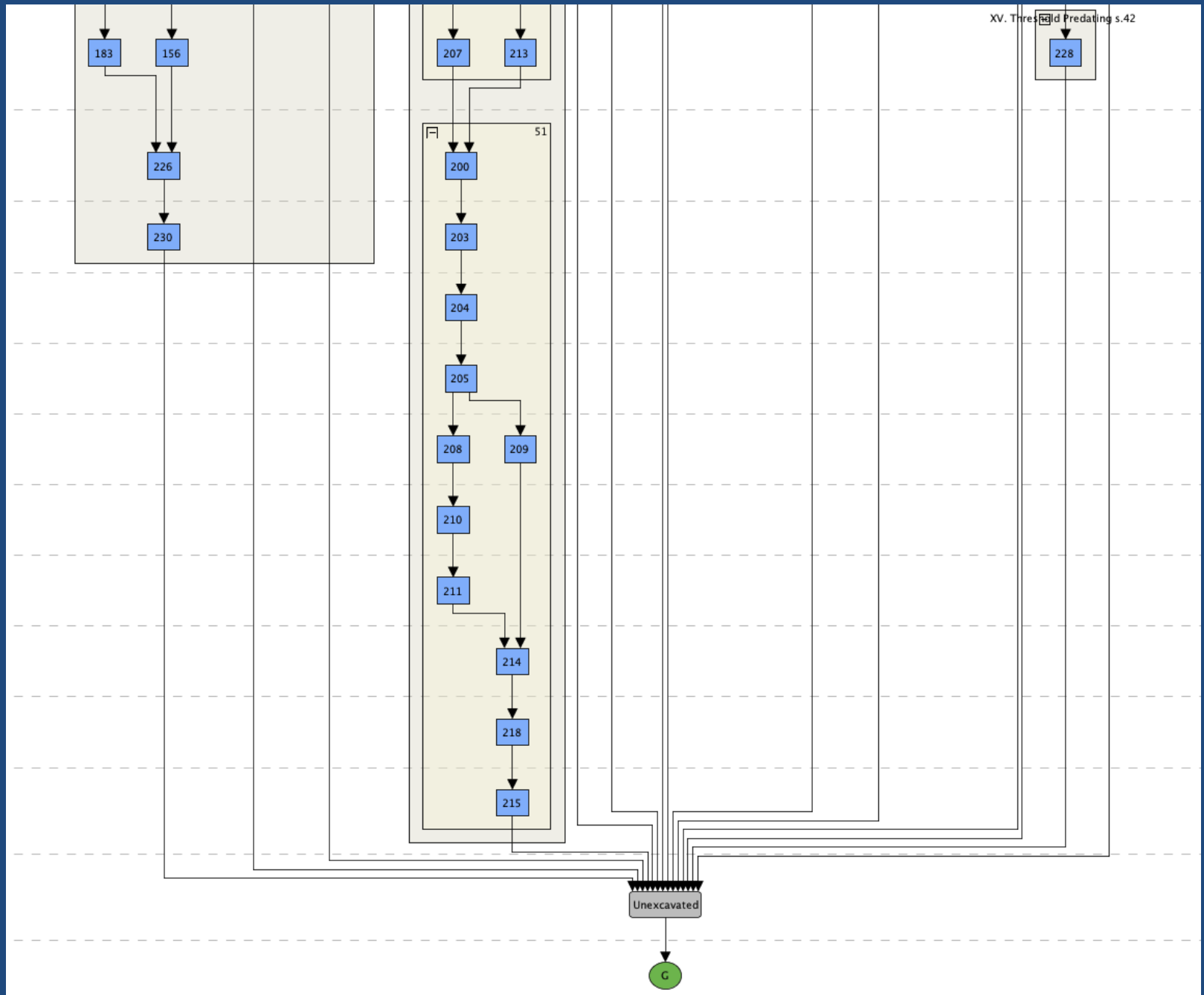


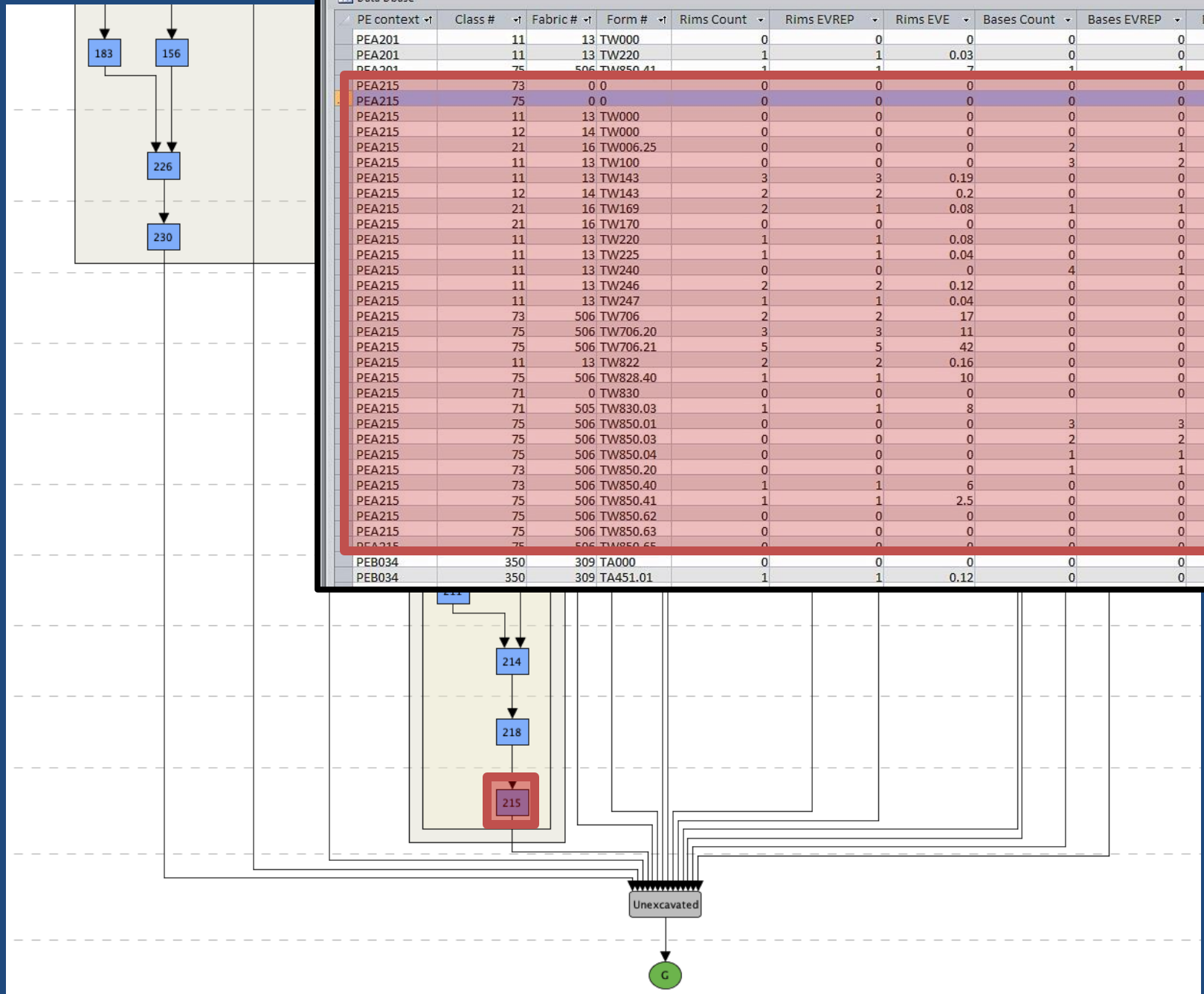
PE context	Class #	Fabric #	Form #	Rims Count	Rims EVREP	Rims EVE	Bases Count	Bases EVREP	Bases EVE	Handles Count	Handles EVRE	Handles EVE	Other Count
PEA201	11	13	TW000	0	0	0	0	0	0	0	0	0	0
PEA201	11	13	TW220	1	1	0.03	0	0	0	0	0	0	0
PEA201	75	506	TW850.41	1	1	7	1	1	50	3			
PEA215	73	0	0	0	0	0	0	0	0	0	0	0	11
PEA215	75	0	0	0	0	0	0	0	0	0	0	0	43
PEA215	11	13	TW000	0	0	0	0	0	0	0	0	0	41
PEA215	12	14	TW000	0	0	0	0	0	0	0	0	0	1
PEA215	21	16	TW006.25	0	0	0	2	1	0.11	0	0	0	0
PEA215	11	13	TW100	0	0	0	3	2	0.46	0	0	0	0
PEA215	11	13	TW143	3	3	0.19	0	0	0	0	0	0	0
PEA215	12	14	TW143	2	2	0.2	0	0	0	0	0	0	0
PEA215	21	16	TW169	2	1	0.08	1	1	0.23	0	0	0	0
PEA215	21	16	TW170	0	0	0	0	0	0	0	0	0	1
PEA215	11	13	TW220	1	1	0.08	0	0	0	0	0	0	0
PEA215	11	13	TW225	1	1	0.04	0	0	0	0	0	0	0
PEA215	11	13	TW240	0	0	0	4	1	0.55	0	0	0	0
PEA215	11	13	TW246	2	2	0.12	0	0	0	0	0	0	0
PEA215	11	13	TW247	1	1	0.04	0	0	0	0	0	0	0
PEA215	73	506	TW706	2	2	17	0	0	0	0	0	0	0
PEA215	75	506	TW706.20	3	3	11	0	0	0	0	0	0	0
PEA215	75	506	TW706.21	5	5	42	0	0	0	0	0	0	0
PEA215	11	13	TW822	2	2	0.16	0	0	0	0	0	0	0
PEA215	75	506	TW828.40	1	1	10	0	0	0	0	0	0	0
PEA215	71	0	TW830	0	0	0	0	0	0	0	0	0	2
PEA215	71	505	TW830.03	1	1	8							
PEA215	75	506	TW850.01	0	0	0	3	3	31	0	0	0	0
PEA215	75	506	TW850.03	0	0	0	2	2	62	0	0	0	0
PEA215	75	506	TW850.04	0	0	0	1	1	26	0	0	0	0
PEA215	73	506	TW850.20	0	0	0	1	1	20	0	0	0	0
PEA215	73	506	TW850.40	1	1	6	0	0	0	0	0	0	0
PEA215	75	506	TW850.41	1	1	2.5	0	0	0	0	0	0	0
PEA215	75	506	TW850.62	0	0	0	0	0	0	0	0	0	0
PEA215	75	506	TW850.63	0	0	0	0	0	0	0	0	0	0
PEA215	75	506	TW850.65	0	0	0	0	0	0	0	0	0	0
PEB034	350	309	TA000	0	0	0	0	0	0	0	0	0	0
PEB034	350	309	TA451.01	1	1	0.12	0	0	0	0	0	0	0
PEB069	44	0	TW884	1	1	7.5	1	1	62.5	0	0	0	0
PEB110	44	0	TW118				1	1	35	0	0	0	0
PEB134	350	710	TA452	0	0	0	0	0	0	0	0	0	1
PEB160	75	0	0										
PEB160	75	506	0	1	1	2.5							
PEB160	44	0	TW273	2	1	7.5	0	0	0	0	0	0	0
PEB180	43	100	0	0	0	0	0	0	0	0	0	0	2
PEB180	44	0	0	0	0	0	0	0	0	0	0	0	12
PEB180	350	999	TA000	0	0	0	0	0	0	0	0	0	4

QUANTITATIVE MEASURES

- SHERD COUNT
- WEIGHT
- EVREP (= ESTIMATED VESSELS REPRESENTED)
- EVE (= ESTIMATED VESSEL EQUIVALENTS)
- MANUFACTURING COST
- AMPHORA CAPACITY

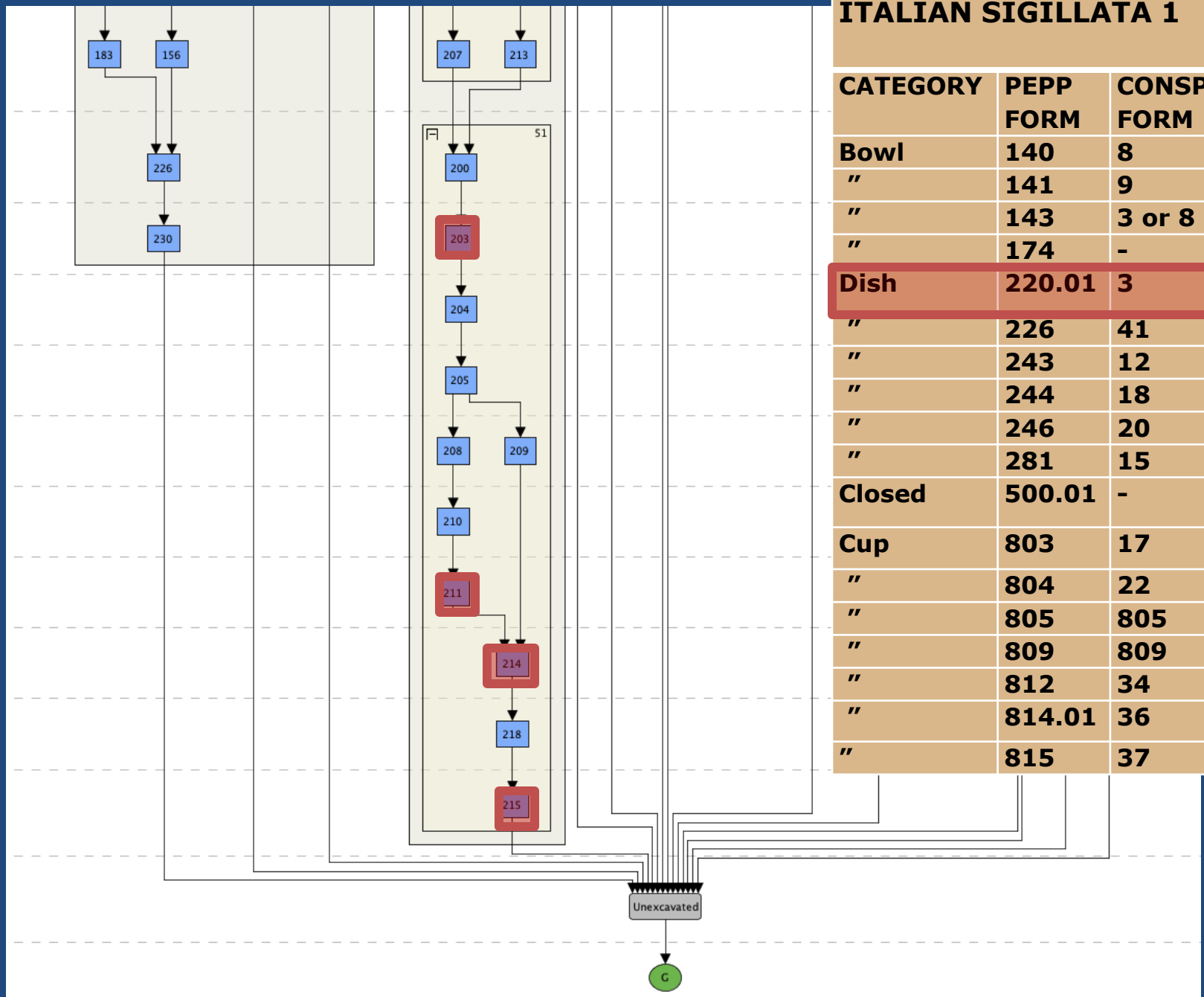



XV. Threshold Predating s.42
183
156
226
230
207
213
51
200
203
204
205
208
209
210
211
214
218
215
228
Unexcavated
G



Data Dbase

PE context	Class #	Fabric #	Form #	Rims Count	Rims EVREP	Rims EVE	Bases Count	Bases EVREP	Bases EVE	Har
PEA201	11	13	TW000	0	0	0	0	0	0	
PEA201	11	13	TW220	1	1	0.03	0	0	0	
PEA201	75	506	TW850.41	1	1	7	1	1	50	
PEA215	73	0	0	0	0	0	0	0	0	
PEA215	75	0	0	0	0	0	0	0	0	
PEA215	11	13	TW000	0	0	0	0	0	0	
PEA215	12	14	TW000	0	0	0	0	0	0	
PEA215	21	16	TW006.25	0	0	0	2	1	0.11	
PEA215	11	13	TW100	0	0	0	3	2	0.46	
PEA215	11	13	TW143	3	3	0.19	0	0	0	
PEA215	12	14	TW143	2	2	0.2	0	0	0	
PEA215	21	16	TW169	2	1	0.08	1	1	0.23	
PEA215	21	16	TW170	0	0	0	0	0	0	
PEA215	11	13	TW220	1	1	0.08	0	0	0	
PEA215	11	13	TW225	1	1	0.04	0	0	0	
PEA215	11	13	TW240	0	0	0	4	1	0.55	
PEA215	11	13	TW246	2	2	0.12	0	0	0	
PEA215	11	13	TW247	1	1	0.04	0	0	0	
PEA215	73	506	TW706	2	2	17	0	0	0	
PEA215	75	506	TW706.20	3	3	11	0	0	0	
PEA215	75	506	TW706.21	5	5	42	0	0	0	
PEA215	11	13	TW822	2	2	0.16	0	0	0	
PEA215	75	506	TW828.40	1	1	10	0	0	0	
PEA215	71	0	TW830	0	0	0	0	0	0	
PEA215	71	505	TW830.03	1	1	8				
PEA215	75	506	TW850.01	0	0	0	3	3	31	
PEA215	75	506	TW850.03	0	0	0	2	2	62	
PEA215	75	506	TW850.04	0	0	0	1	1	26	
PEA215	73	506	TW850.20	0	0	0	1	1	20	
PEA215	73	506	TW850.40	1	1	6	0	0	0	
PEA215	75	506	TW850.41	1	1	2.5	0	0	0	
PEA215	75	506	TW850.62	0	0	0	0	0	0	
PEA215	75	506	TW850.63	0	0	0	0	0	0	
PEA215	75	506	TW850.65	0	0	0	0	0	0	
PEB034	350	309	TA000	0	0	0	0	0	0	
PEB034	350	309	TA451.01	1	1	0.12	0	0	0	



ITALIAN SIGILLATA 1

CATEGORY	PEPP FORM	CONSPECTUS FORM
Bowl	140	8
"	141	9
"	143	3 or 8
"	174	-
Dish	220.01	3
"	226	41
"	243	12
"	244	18
"	246	20
"	281	15
Closed	500.01	-
Cup	803	17
"	804	22
"	805	805
"	809	809
"	812	34
"	814.01	36
"	815	37

CALIFORNIA
CLASSICAL
STUDIES

A PEER-REVIEWED OPEN-ACCESS PUBLICATION PROJECT

Search

RECENT POSTS

- Submission Competition for Junior Scholars
- Further thoughts on ePub for scholarly publishing
- Edward Courtney's Commentary on Juvenal now available
- Adventures in ePub conversion
- Leslie Kurke's The Traffic in Praise published in digital edition

CATEGORIES

- Uncategorized

BLOGROLL

- Documentation
- Feedback
- Plugins
- Support Forums
- Themes
- WordPress Blog
- WordPress Planet

PAGES

- About CCS

Home

California Classical Studies publishes peer-reviewed long-form scholarship with online open access and print-on-demand availability. The primary aim of the series is to disseminate basic research (editing and analysis of primary materials both textual and physical), data-heavy research, and highly specialized research of the kind that is either hard to place with the leading publishers in Classics or extremely expensive for libraries and individuals when produced by a leading academic publisher. In addition to promoting archaeological publications, papyrological and epigraphic studies, technical textual studies, and the like, the series will also produce selected titles of a more general profile.

The startup phase of this project (2013-2015) is supported by a grant from the Andrew W. Mellon Foundation.

Links

Open-access page for our publications:

http://escholarship.org/uc/ucbclassics_ccs

Sales page for POD copies of our publications or for ePub versions:

http://escholarship-california_classical_studies.lulu.com/spotlight/

ACKNOWLEDGEMENTS

- FINANCIAL SUPPORT:

  NATIONAL ENDOWMENT FOR THE HUMANITIES

  WENNER GREN FOUNDATION

  FINNISH ACADEMY

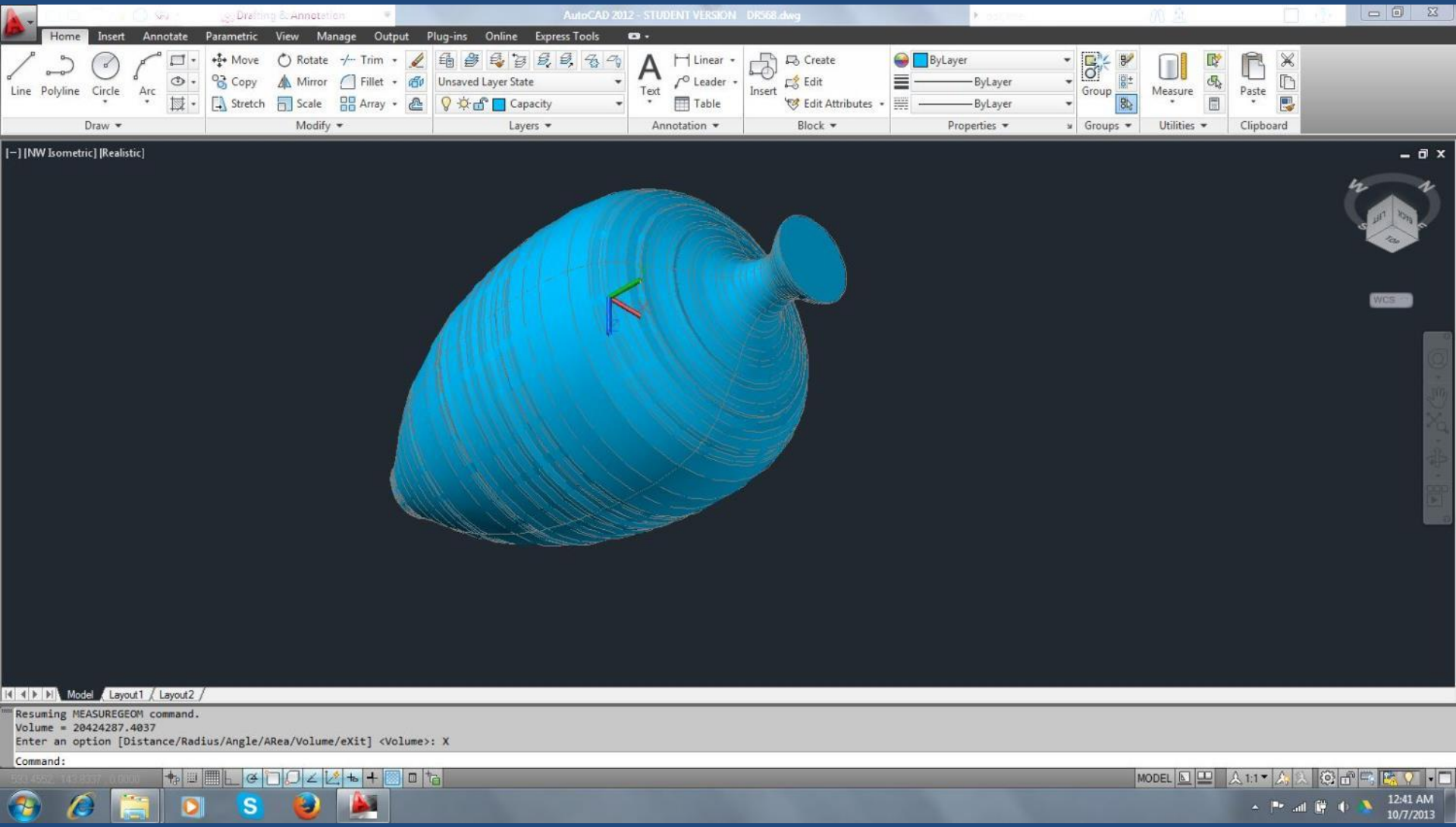
  AMERICAN ACADEMY IN ROME

  UNIVERSITY OF CALIFORNIA, BERKELEY

- ASSISTANCE:

  ERIC HOSTETTER, KIM BOWES, ARCHER MARTIN

3D MODELING AND VOLUMETRIC CALCULATIONS



PREVIOUS AND ALTERNATIVE STUDIES

Rigoir, Yves 1981. « Méthode géométrique simple de calcul du volume des contenants céramiques.» *Documents d'Archéologie Méridionale* 4, 193-194.

Le calcul du volume des amphores
Calculate the volume of an amphora

Méthodologie / Methodology

Amphores produites en Égypte / Egyptian amphorae

AE 1 | AE 2

AE 3 | AE 4

AE 3 late

AE 5-6 | AE 7

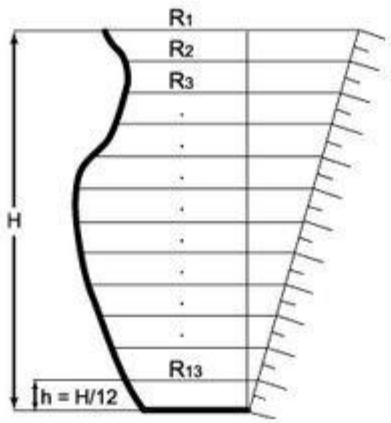
Bibliographie récente/ Recent bibliography

Calcul du volume d'une amphore / Calculate the volume of an amphora

La formule de calcul automatique du volume des amphores que vous trouverez ici a été mise au point par Jean-Vianney Richard, Ingénieur Géomètre Topographe, à l'occasion de son séjour à Alexandrie en 1999. Il est fondé sur les travaux exploratoires d'Yves Rigoir*. Il est libre de droit et vous pouvez l'utiliser selon vos besoins.

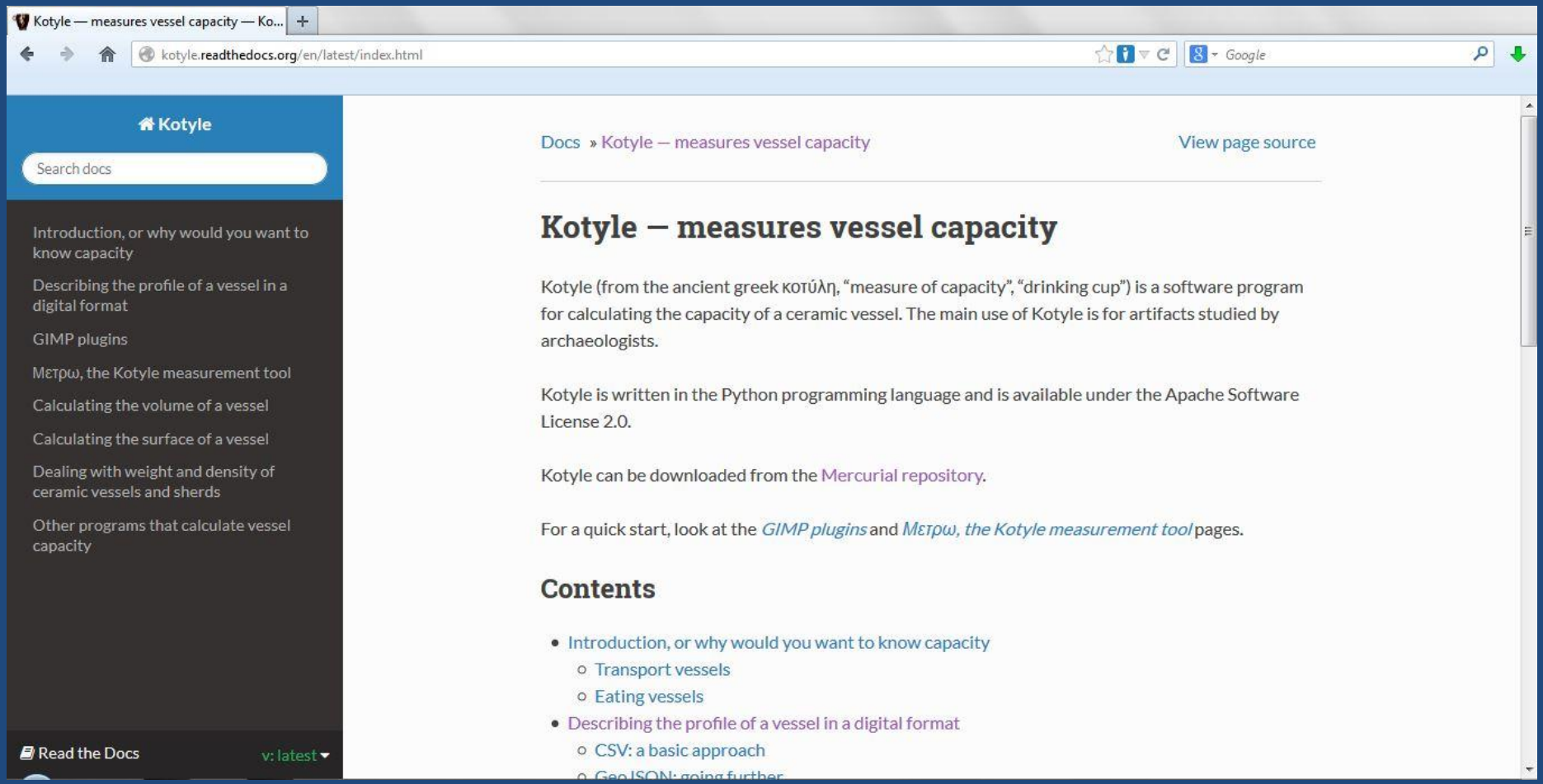
Télécharger le module de calcul

Télécharger la notice



(*) Y. RIGOIR "Méthode géométrique simple de calcul du volume des contenants céramiques".
Documents d'Archéologie Méridionale 4,1981.

KOTYLE


Kotyle — measures vessel capacity — Ko...
kotyle.readthedocs.org/en/latest/index.html
Google
Kotyle
Search docs
Introduction, or why would you want to know capacity
Describing the profile of a vessel in a digital format
GIMP plugins
Μετρω, the Kotyle measurement tool
Calculating the volume of a vessel
Calculating the surface of a vessel
Dealing with weight and density of ceramic vessels and sherds
Other programs that calculate vessel capacity
Read the Docs
v: latest
Docs » Kotyle — measures vessel capacity
View page source
Kotyle — measures vessel capacity
Kotyle (from the ancient greek κοτύλη, "measure of capacity", "drinking cup") is a software program for calculating the capacity of a ceramic vessel. The main use of Kotyle is for artifacts studied by archaeologists.
Kotyle is written in the Python programming language and is available under the Apache Software License 2.0.
Kotyle can be downloaded from the Mercurial repository.
For a quick start, look at the GIMP plugins and Μετρω, the Kotyle measurement tool pages.
Contents
Introduction, or why would you want to know capacity
Transport vessels
Eating vessels
Describing the profile of a vessel in a digital format
CSV: a basic approach

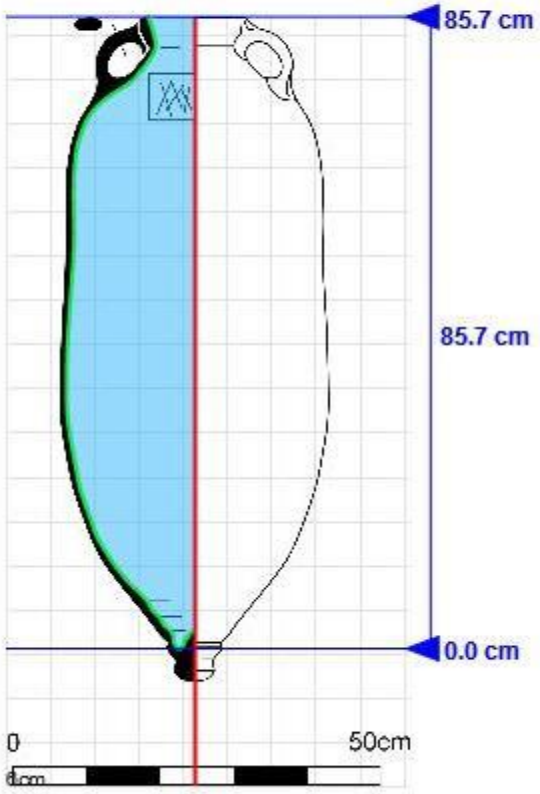
CENTRE DE RECHERCHES EN ARCHÉOLOGIE ET PATRIMOINE

Calculation of the capacity of a vessel from its profile

Image DPI : 600 (236.22 pixels/cm)

Scale : 1 cm on the drawing = 10.000 cm

Water height : 85.7 cm



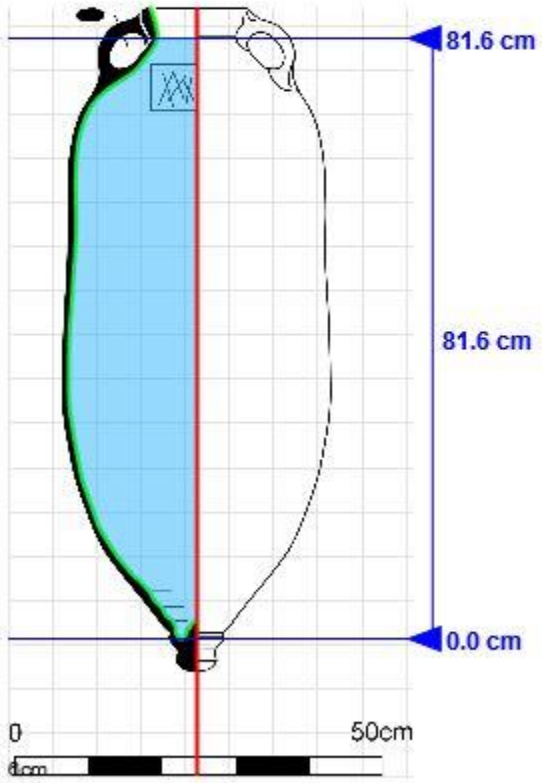
Volume = 55.1029 L

Calculation of the capacity of a vessel from its profile

Image DPI : 600 (236.22 pixels/cm)

Scale : 1 cm on the drawing = 10.000 cm

Water height : 81.6 cm



Volume = 54.6729 L

ERROR

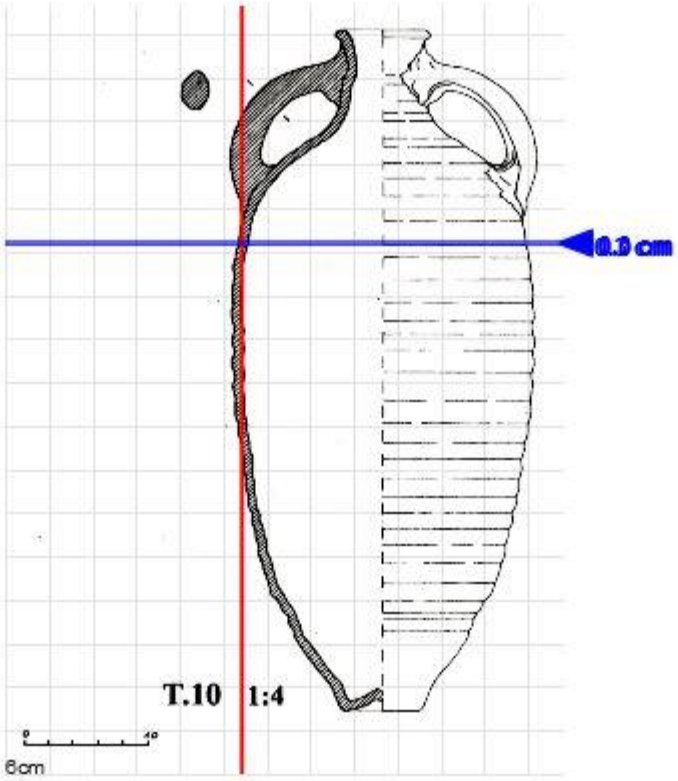
Centre de Recherches en Archéologie et Patrimoine

Calcul de capacité d'un récipient à partir de son profil

DPI de l'image : 300

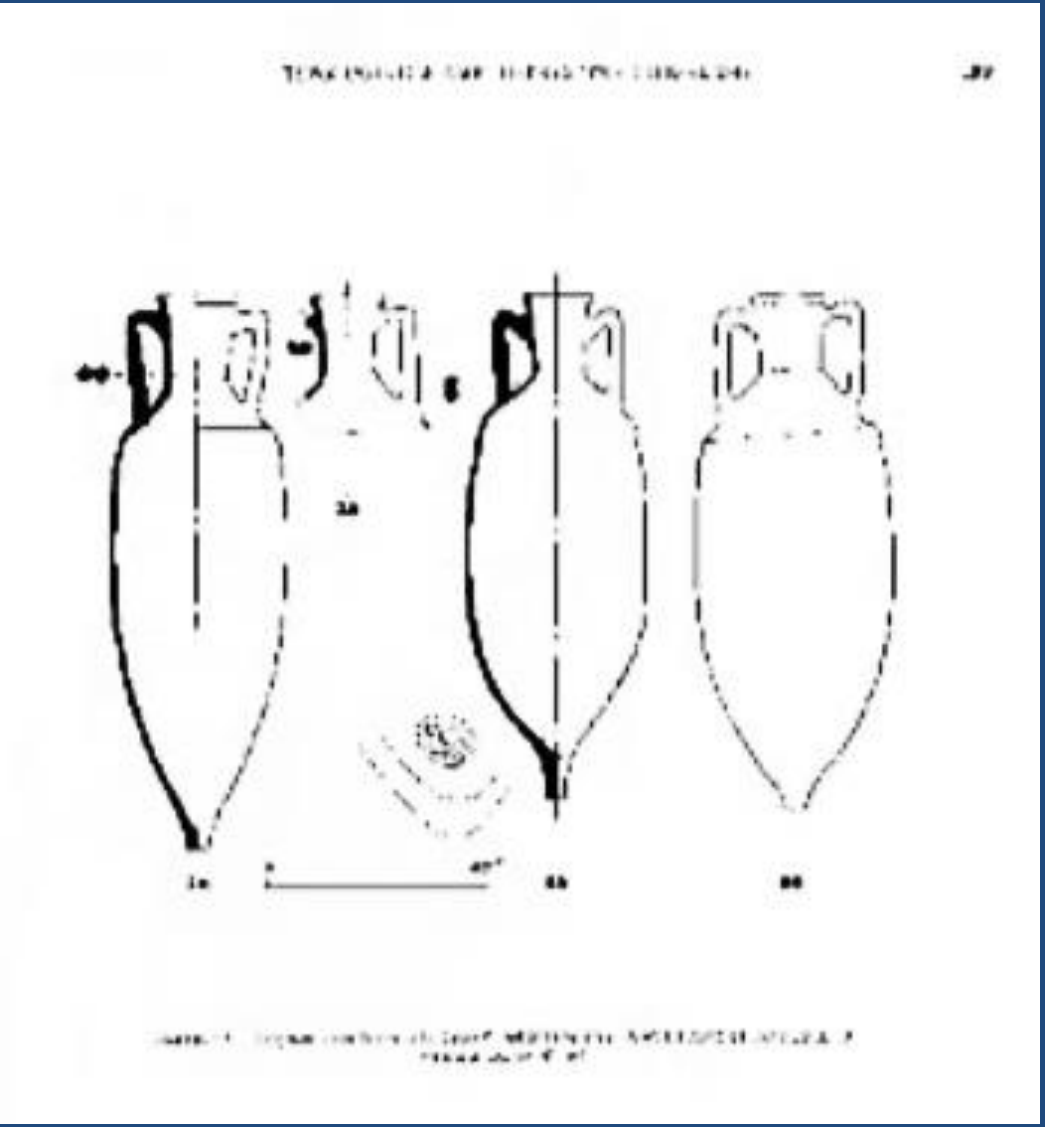
Echelle : 1 cm sur le dessin = cm

Hauteur d'eau : 0.3 cm

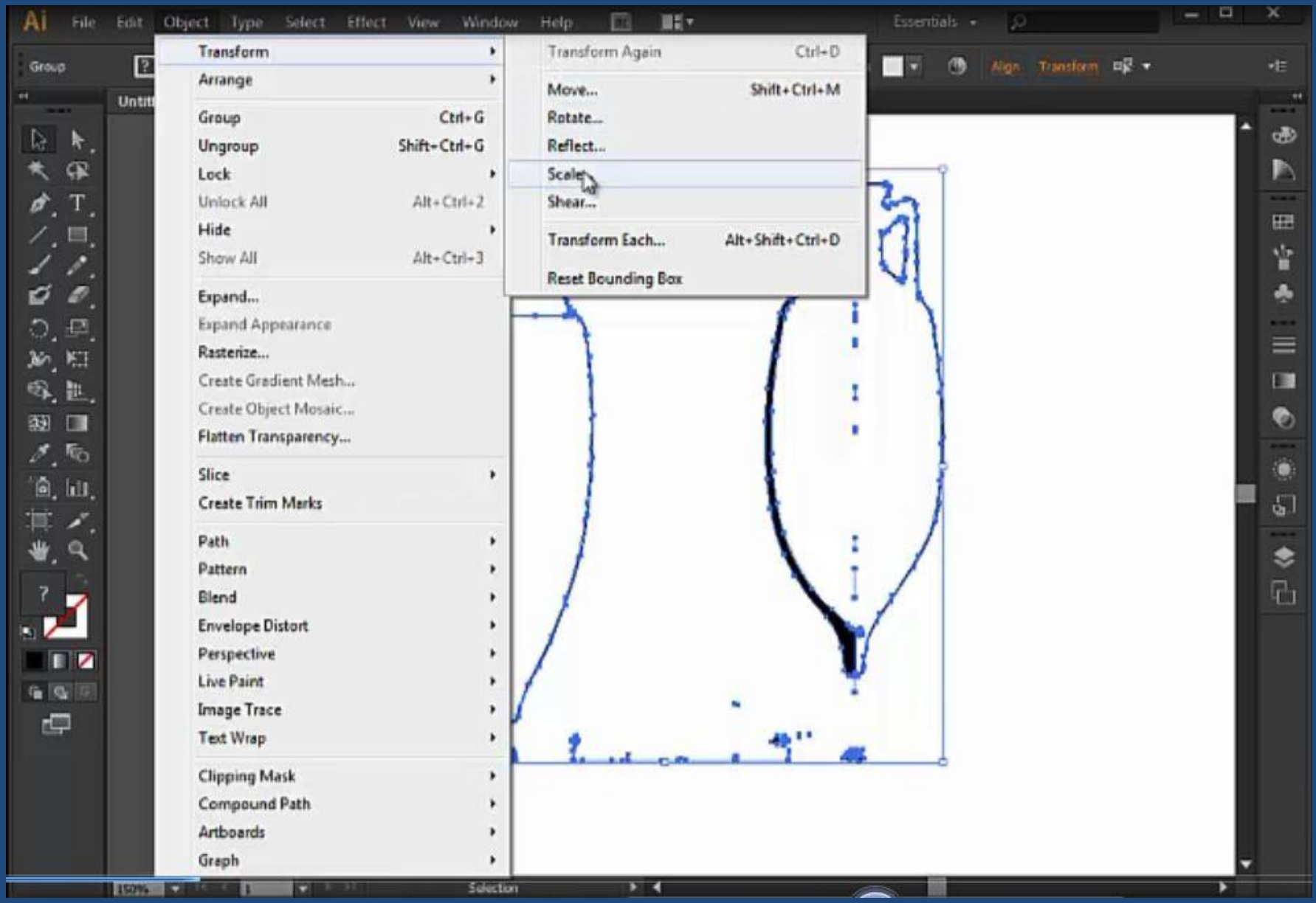


AUTOCAD RENDERING

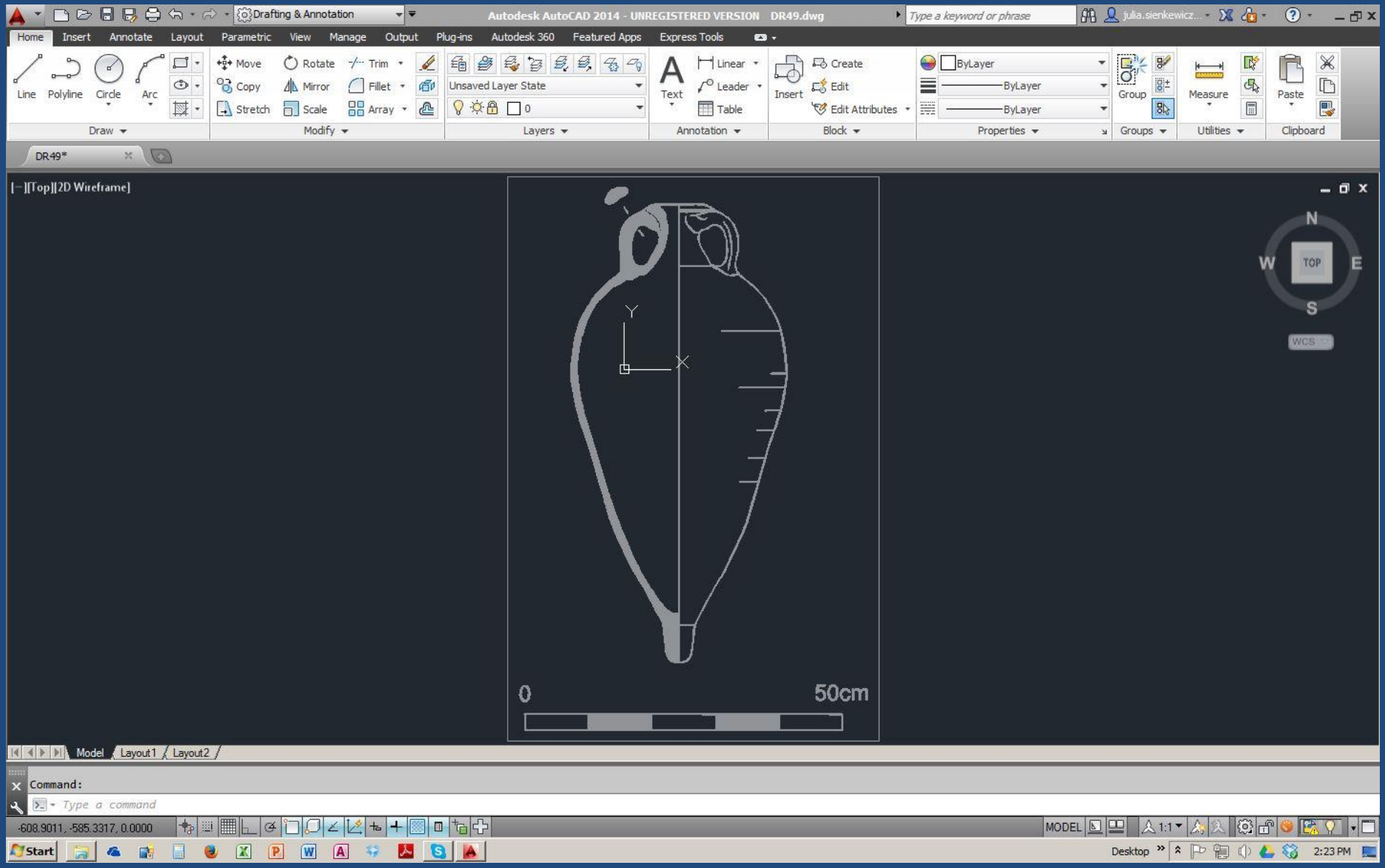
SCANNED IMAGE (.TIF)



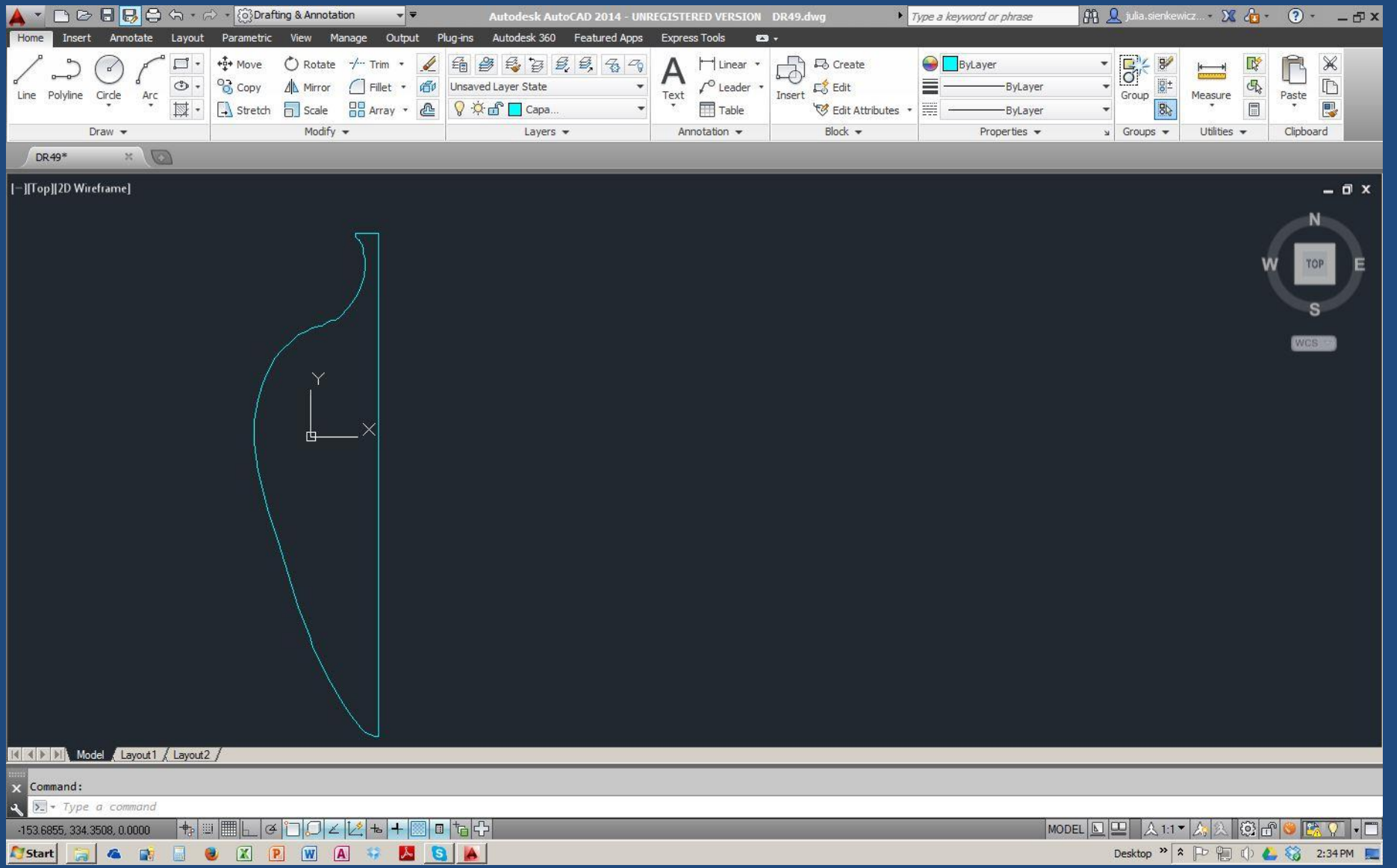
>TRANSFORM > SCALE



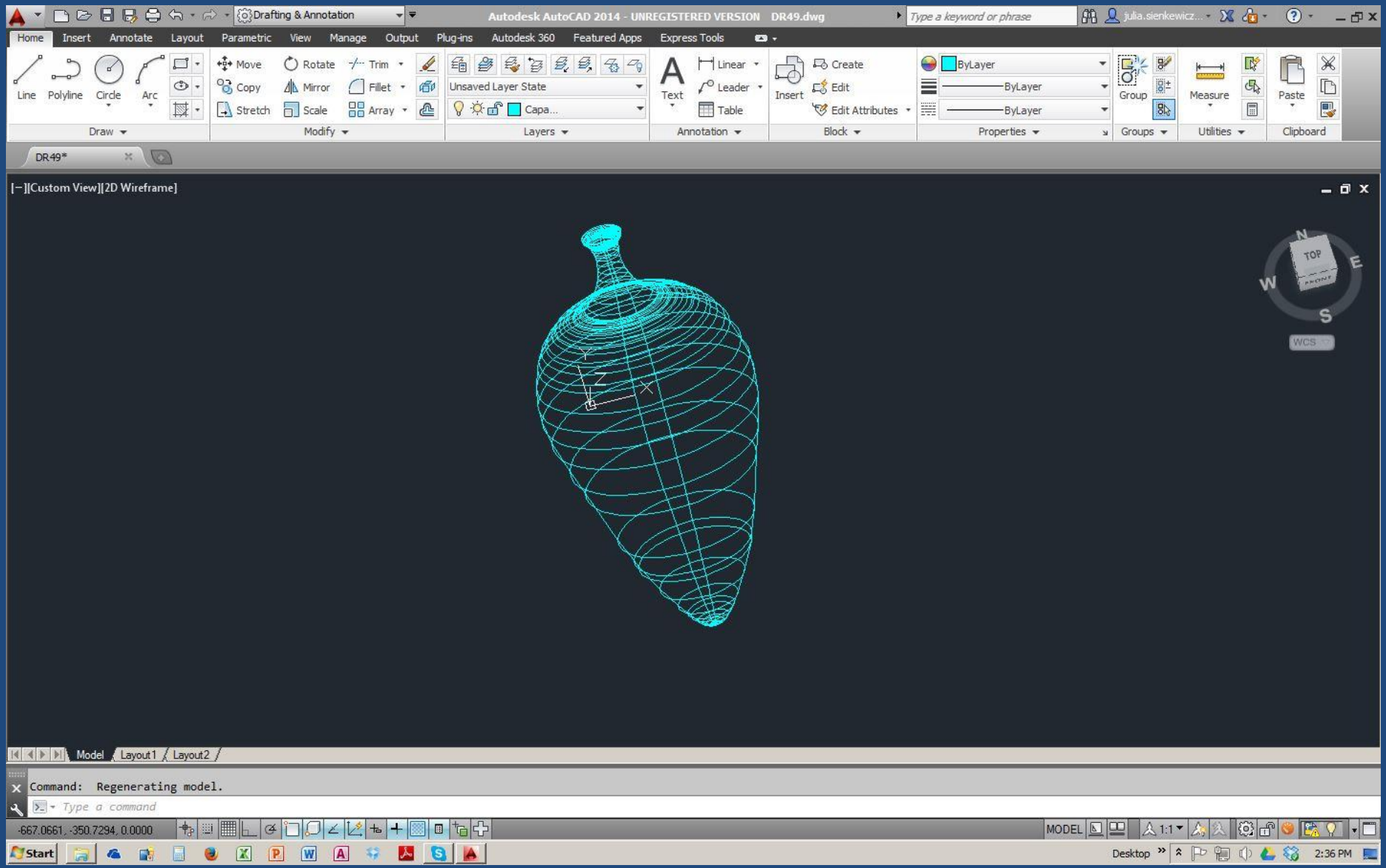
AUTOCAD DRAWING



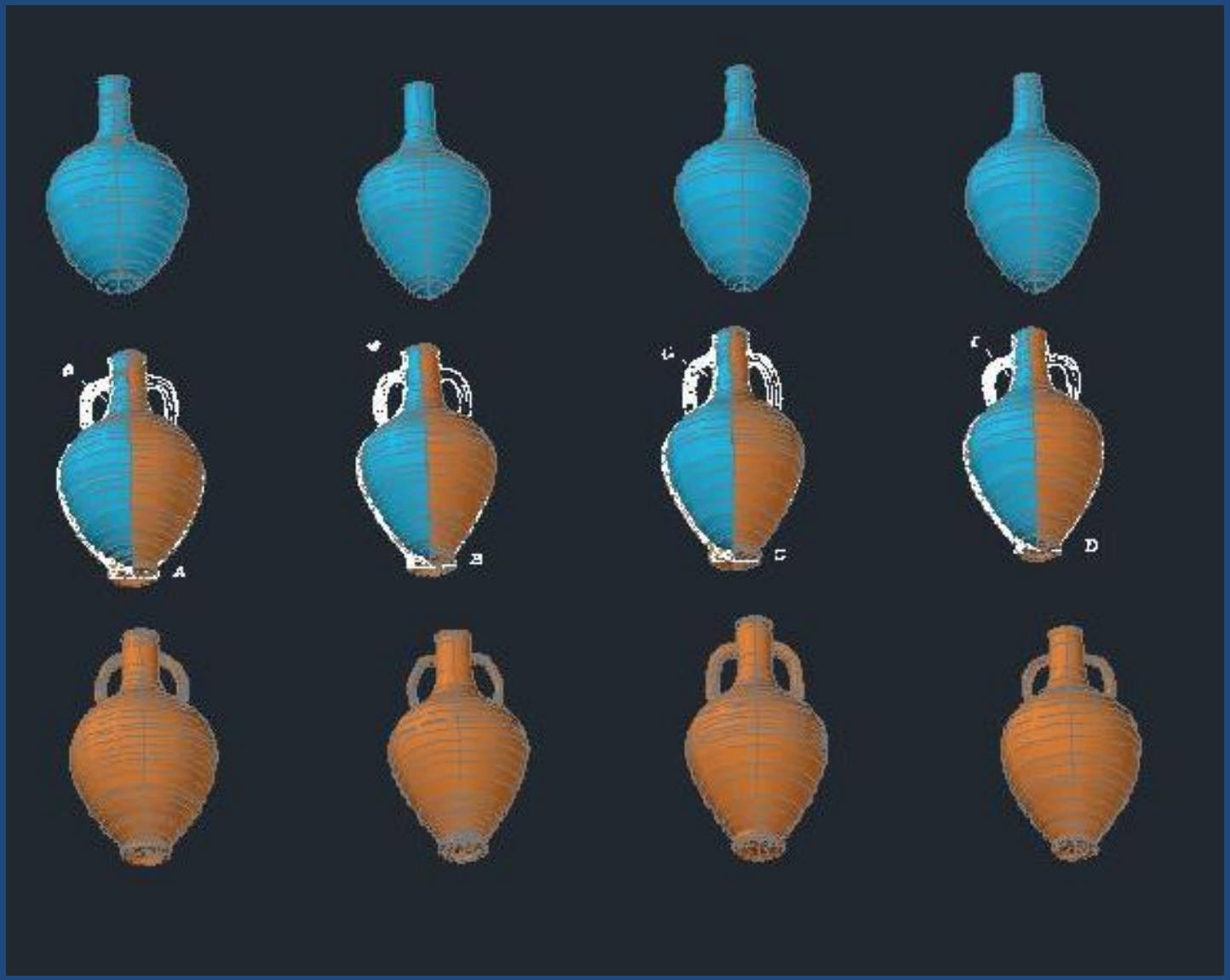
TRACED VOID OF AMPHORA



3D WIRE-FRAME MODEL OF VOID



CAPACITY (THE VOID) AND DISPLACEMENT (THE AMPHORA)



AMPHORAE EX HISPANIA

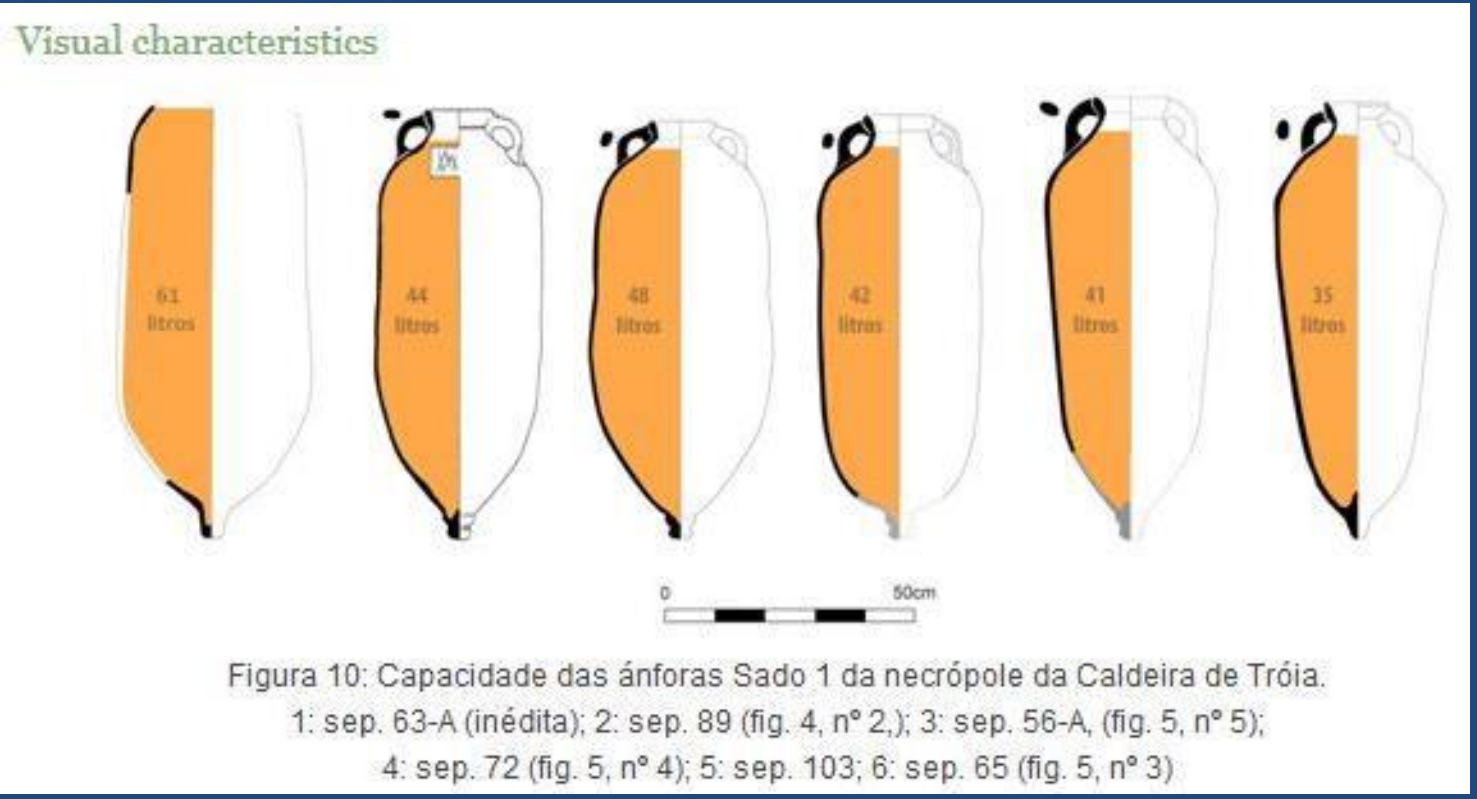


Figura 10: Capacidade das ânforas Sado 1 da necrópole da Caldeira de Tróia.
1: sep. 63-A (inédita); 2: sep. 89 (fig. 4, nº 2,); 3: sep. 56-A, (fig. 5, nº 5);
4: sep. 72 (fig. 5, nº 4); 5: sep. 103; 6: sep. 65 (fig. 5, nº 3)

AMPHORAE EX HISPANIA

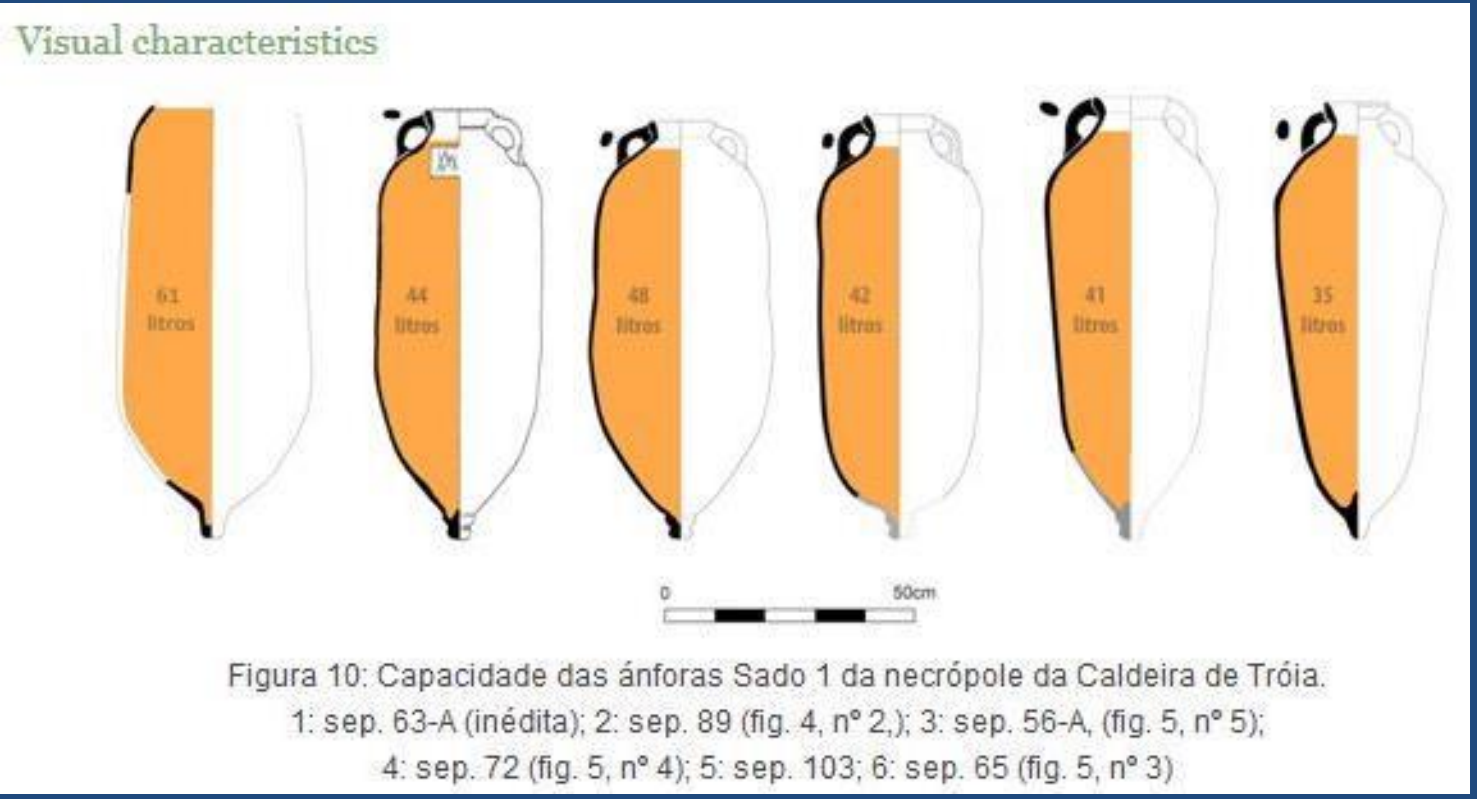


Figura 10: Capacidade das ânforas Sado 1 da necrópole da Caldeira de Tróia.
1: sep. 63-A (inédita); 2: sep. 89 (fig. 4, nº 2,); 3: sep. 56-A, (fig. 5, nº 5);
4: sep. 72 (fig. 5, nº 4); 5: sep. 103; 6: sep. 65 (fig. 5, nº 3)

TOPPED OFF OR NOT?

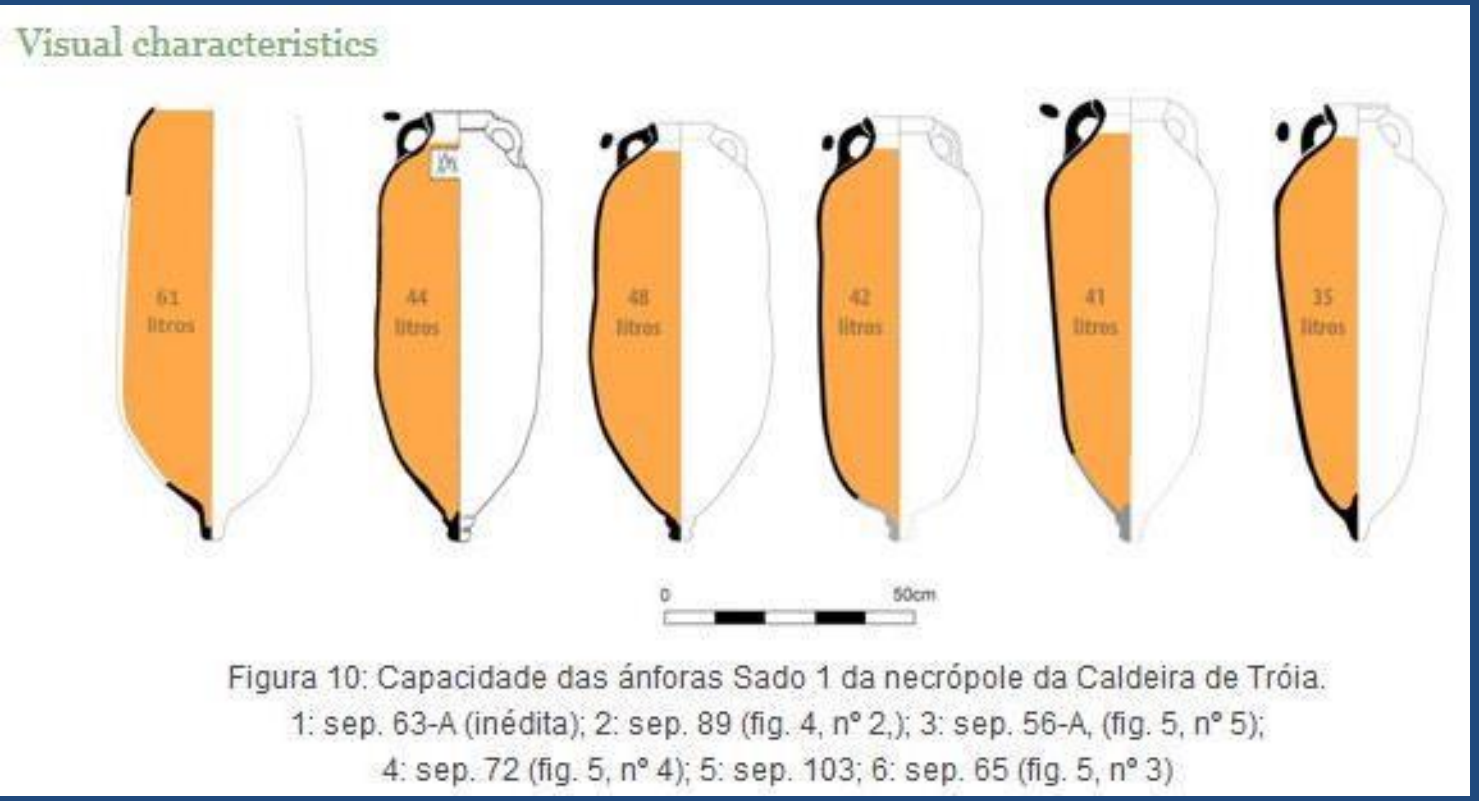
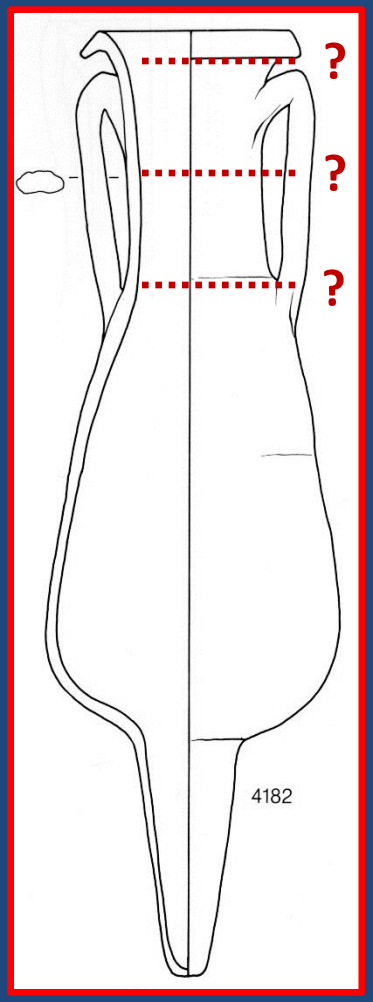
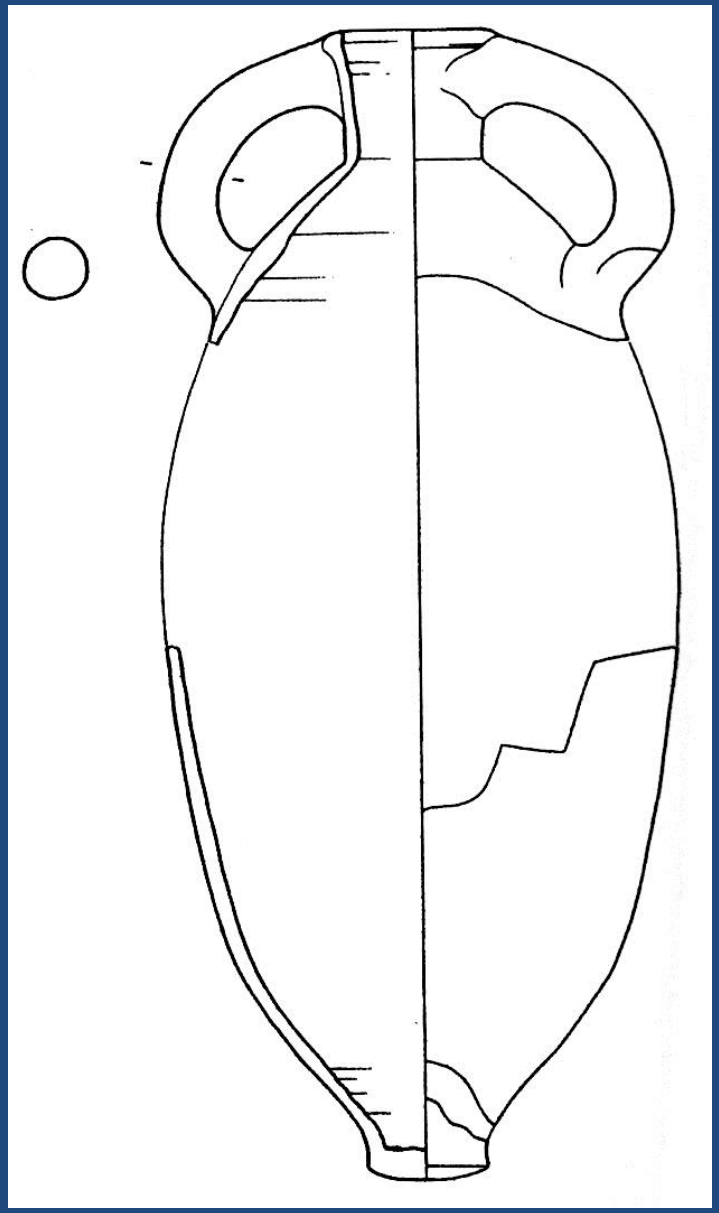


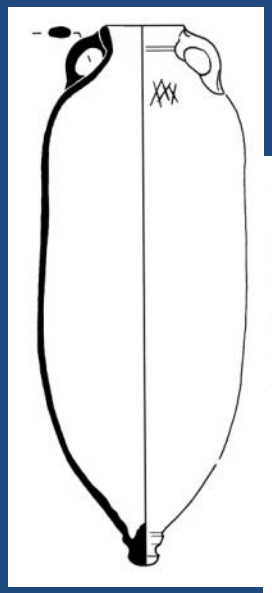
Figura 10: Capacidade das ânforas Sado 1 da necrópole da Caldeira de Tróia.
1: sep. 63-A (inédita); 2: sep. 89 (fig. 4, nº 2,); 3: sep. 56-A, (fig. 5, nº 5);
4: sep. 72 (fig. 5, nº 4); 5: sep. 103; 6: sep. 65 (fig. 5, nº 3)



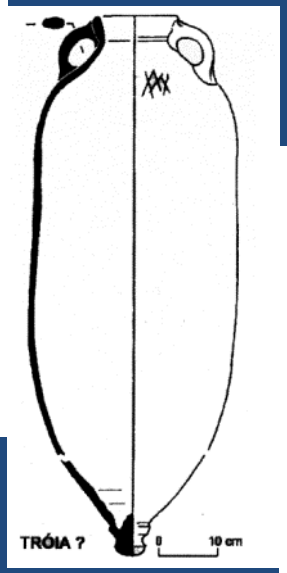
COMPLETE?



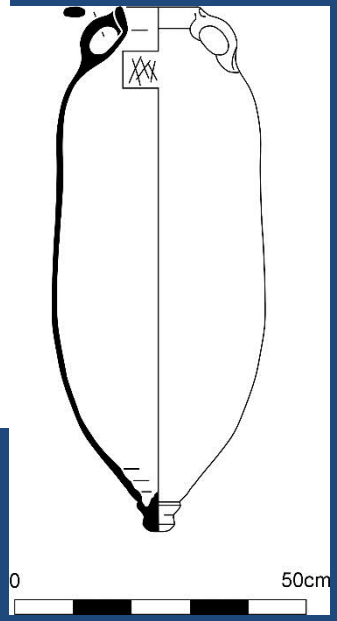
ARE ALL DRAWINGS THE SAME?



Étienne, R. and Mayet, F. *Les salaisons et sauces de poissons hispaniques* (2002)

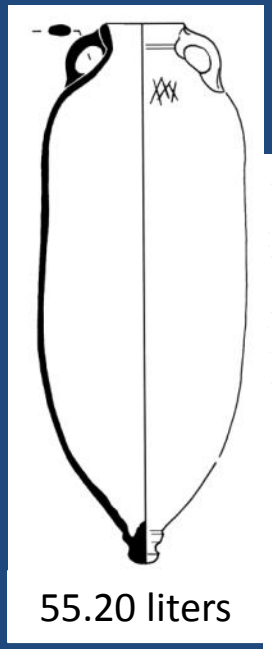


Mayet, F. and Tavares da Silva, C. *Olaria romana do Pinheiro* (2009)



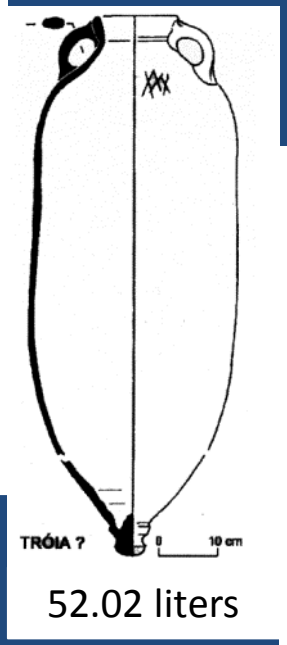
Southampton Amphora Project Website, no. DR514

ARE ALL DRAWINGS THE SAME?



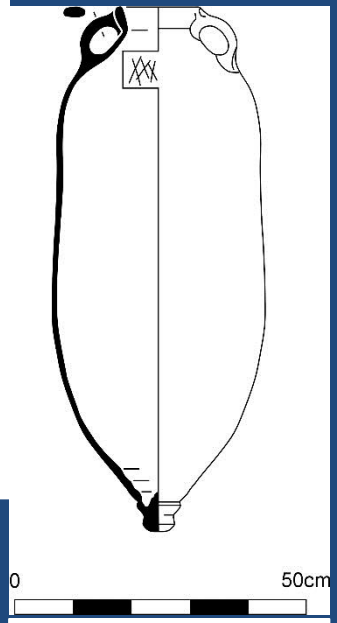
55.20 liters

Étienne, R. and Mayet, F. *Les salaisons et sauces de poissons hispaniques* (2002)



52.02 liters

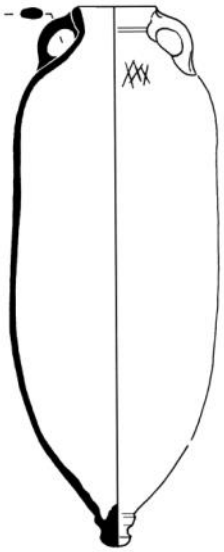
Mayet, F. and Tavares da Silva, C. *Olaria romana do Pinheiro* (2009)



54.34 liters

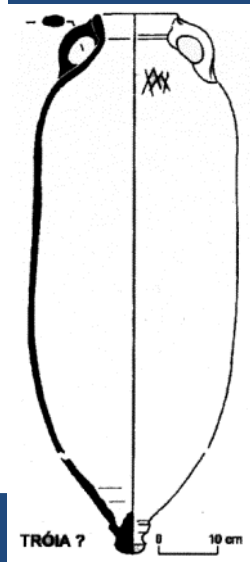
Southampton Amphora Project Website, no. DR514

ARE ALL DRAWINGS THE SAME?



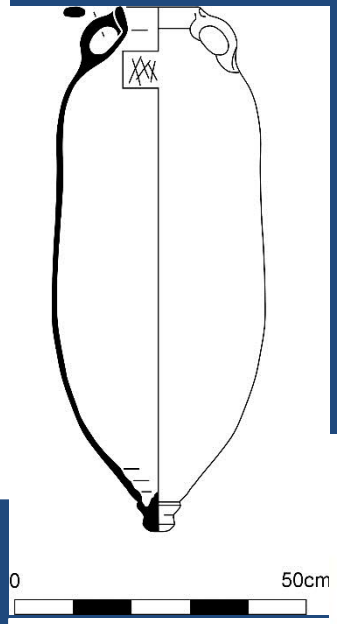
55.20 liters

Étienne, R. and Mayet, F. *Les salaisons et sauces de poissons hispaniques* (2002)



52.02 liters

Mayet, F. and Tavares da Silva, C. *Olaria romana do Pinheiro* (2009)



54.34 liters

Southampton Amphora Project Website, no. DR514

44 liters

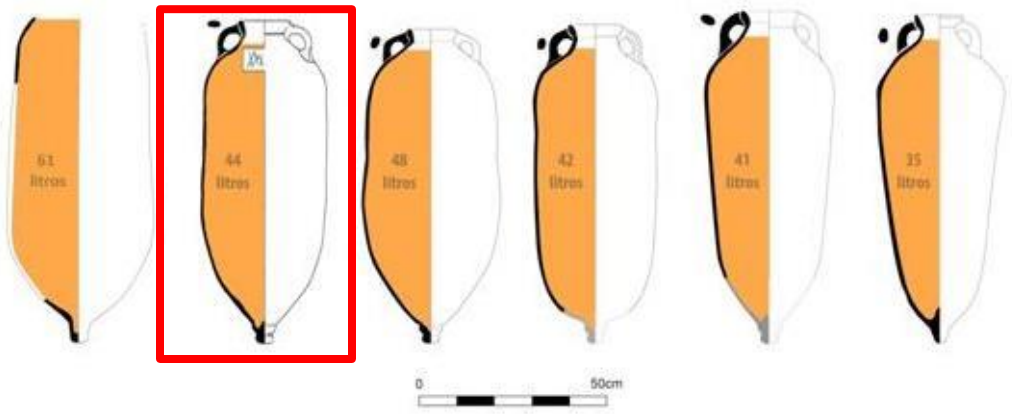


Figura 10: Capacidade das ánforas Sado 1 da necrópole da Caldeira de Tróia.
1: sep. 63-A (inédita); 2: sep. 89 (fig. 4, nº 2,); 3: sep. 56-A, (fig. 5, nº 5);
4: sep. 72 (fig. 5, nº 4); 5: sep. 103; 6: sep. 65 (fig. 5, nº 3)

FOR ASSISTANCE OF VARIOUS KINDS, THANKS GO TO

- J. Theodore Peña, Classics, University of California at Berkeley
- Cody Gaynor, Duke University
- Julia A Sienkewicz, Duquesne University
- Office of the Provost, The University of North Carolina at Chapel Hill