



UNIVERSITY OF
CAMBRIDGE



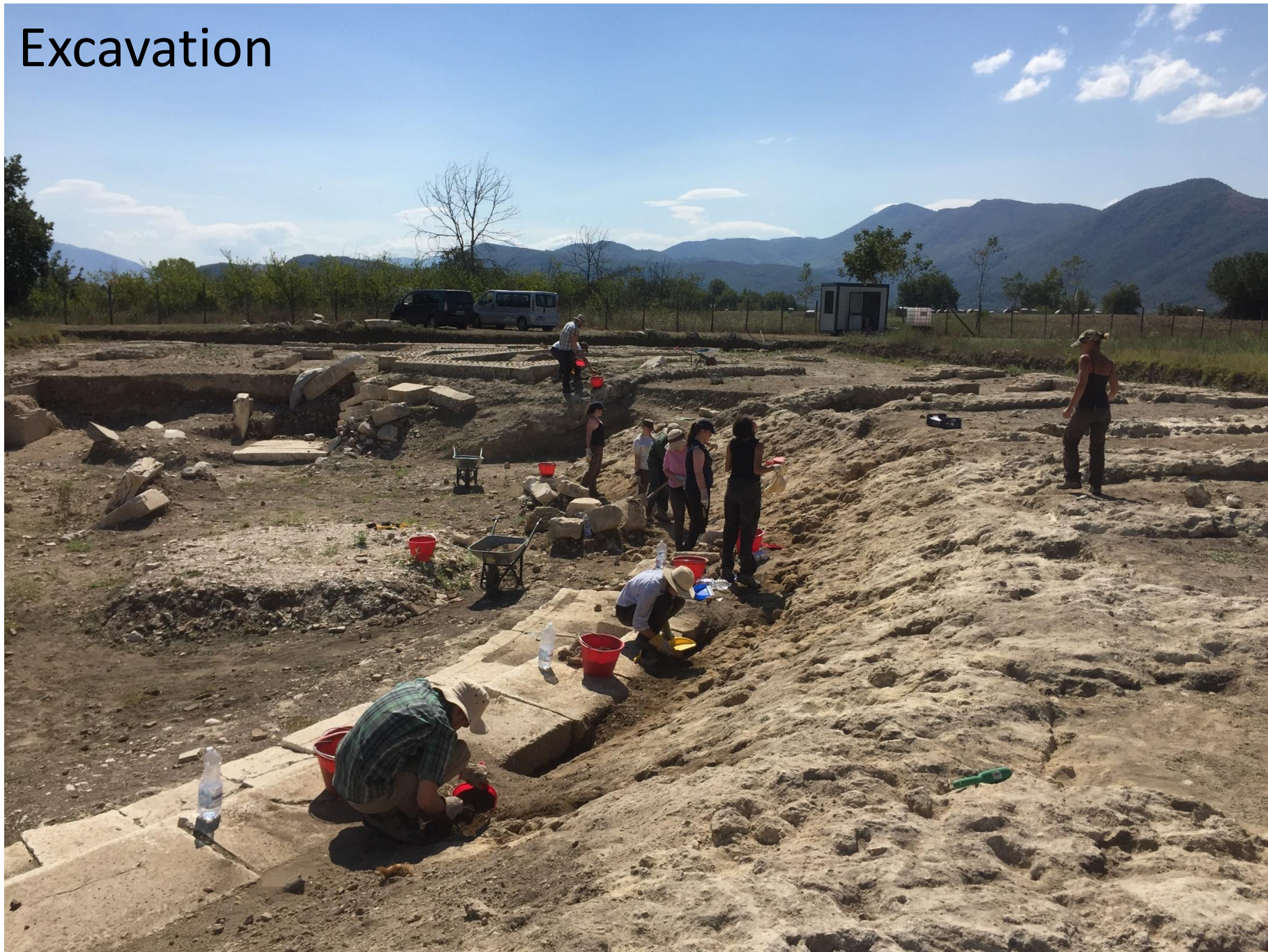
COMMONWARE ROMAN POTTERY

FROM EXCAVATION TO DIGITAL FEATURES CLASSIFICATION

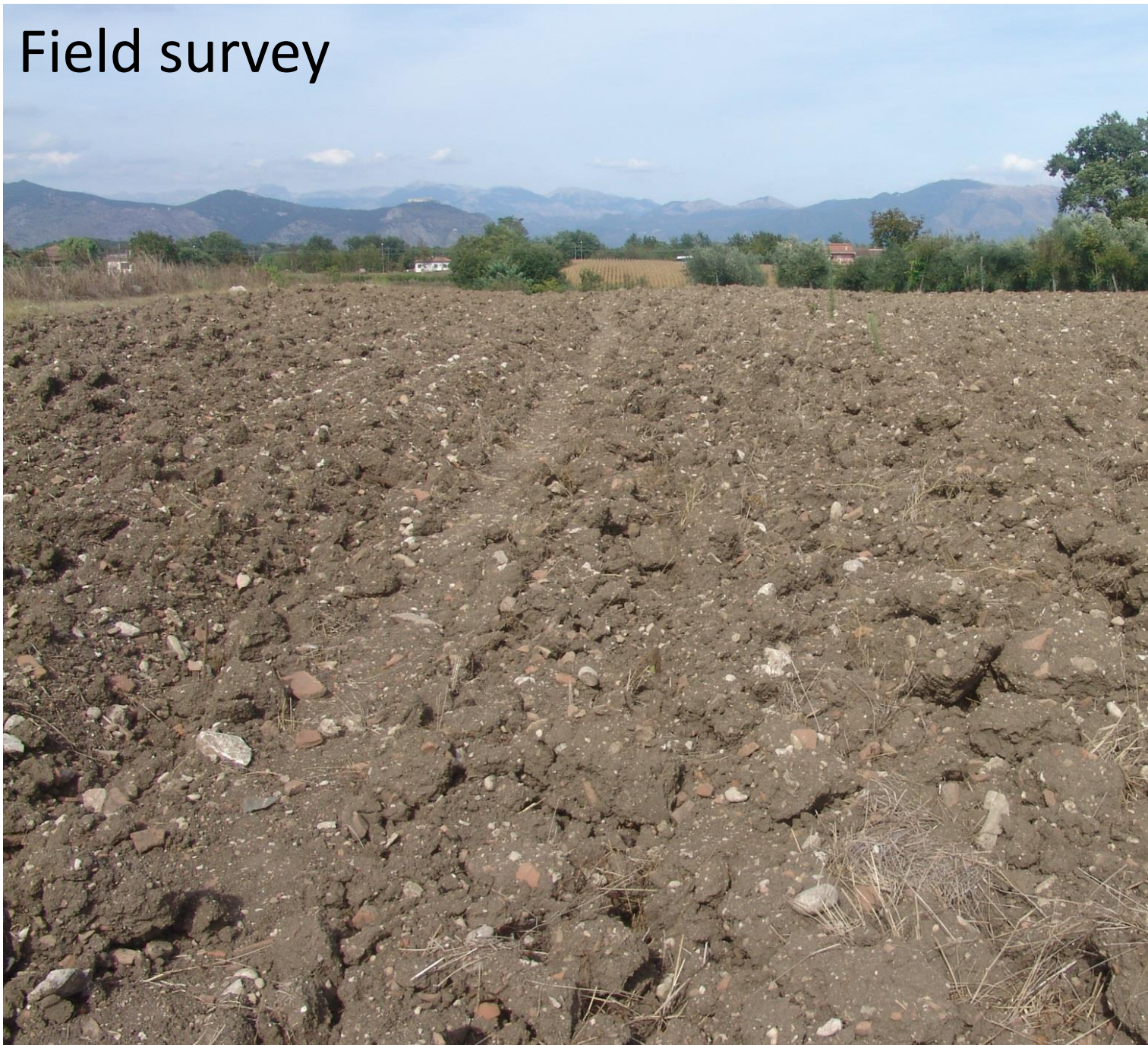
(a pilot project)

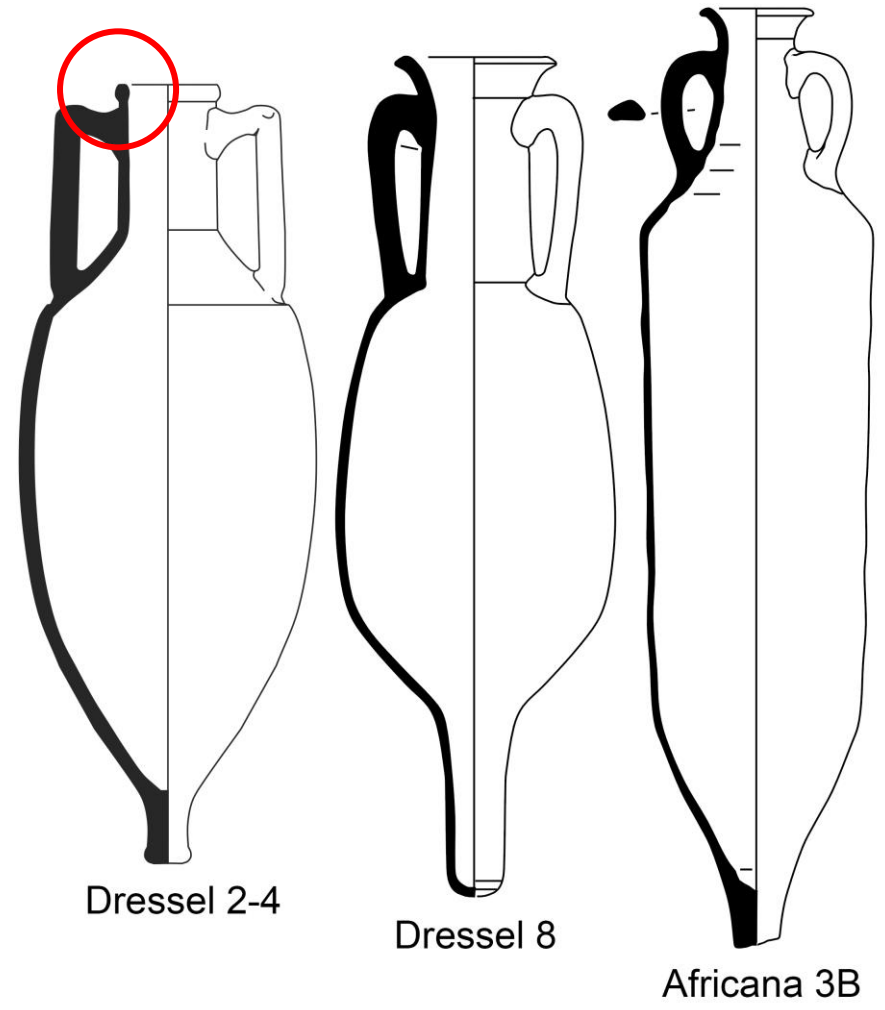
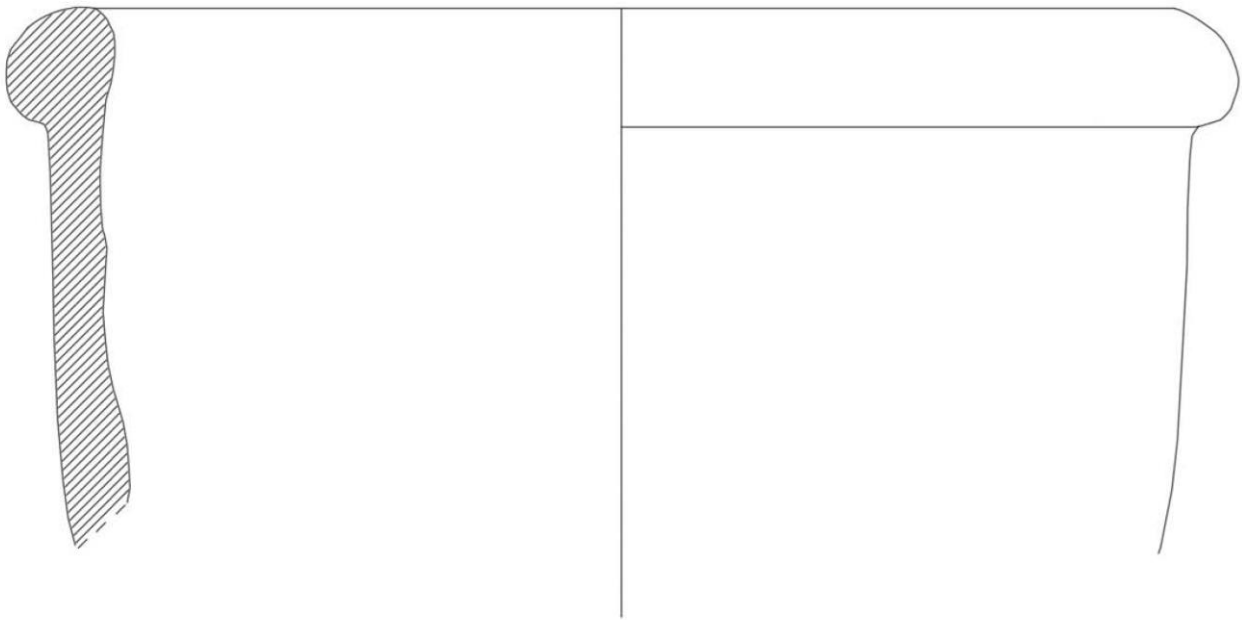
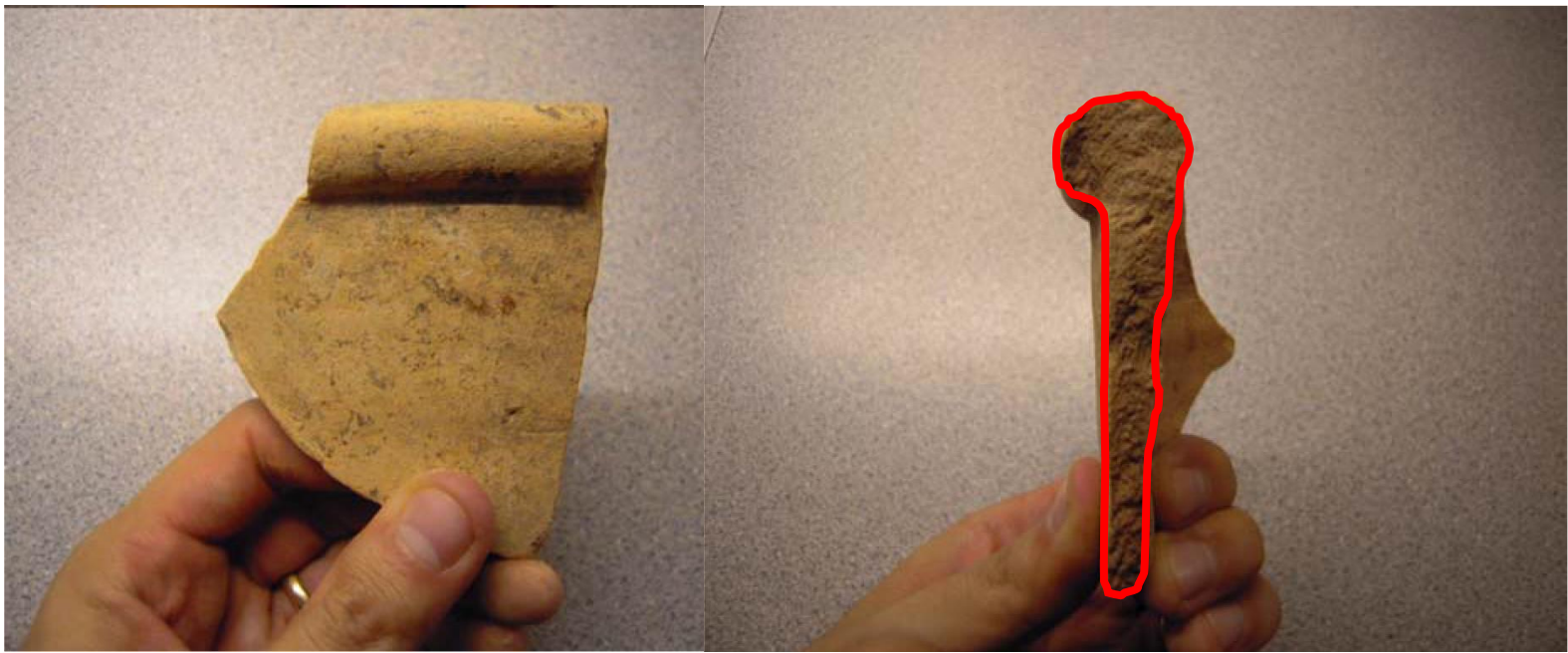
Alessandro Launaro, Lecturer in Classics, Faculty of Classics, (al506@cam.ac.uk)
Simone Parisotto, PhD Student, Cambridge Centre for Analysis (sp751@cam.ac.uk)

Excavation



Field survey





Fineware pottery

Commonware pottery



Barbotinekeramik
Der Kantharos und die zwei Fußbecher
wurden versteckt in den Resten einer

Barbotine Pottery
This kantharos and two goblets were
found in a Roman villa, hidden in
the remains of a chest. The vessels are

Barbotinegefäße,
Schambach, Kr. Weißen-
burg-Gunzenhen-
Bayern, 2. Hälfte 2.-

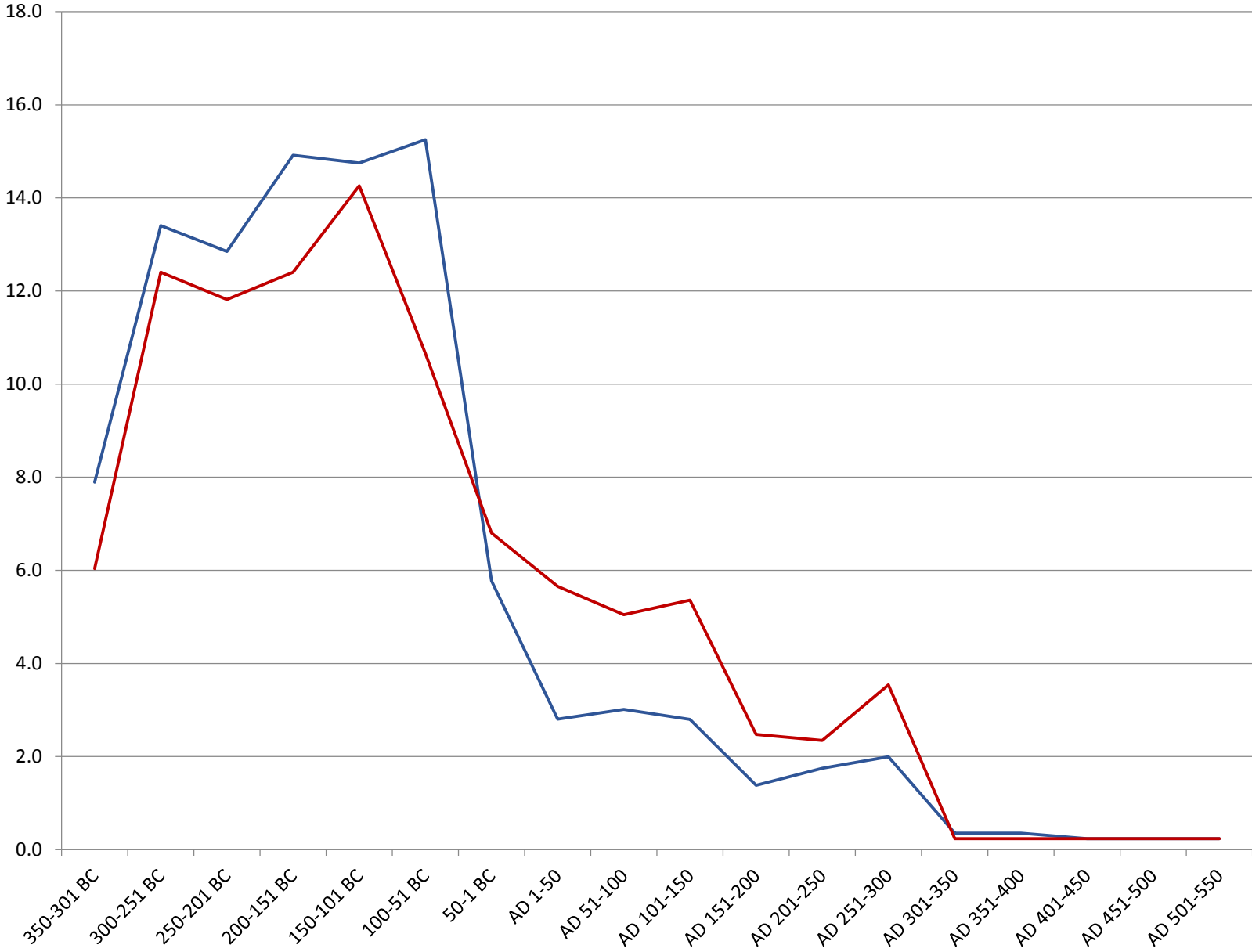
Kantharos, sog. terra
sigillata mit Barbotinedekor
Barbotine kantharos, terra sigillata
R 30

Fineware potsherds from Interamna Lirenas (Central Italy)

- **Black-gloss:** produced **locally**
- **Terra sigillata:** from **Central Italy** (e.g. Etruria, Campania)
- **African Red Slip:** from **Northern Africa**

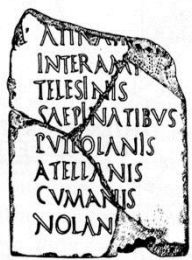
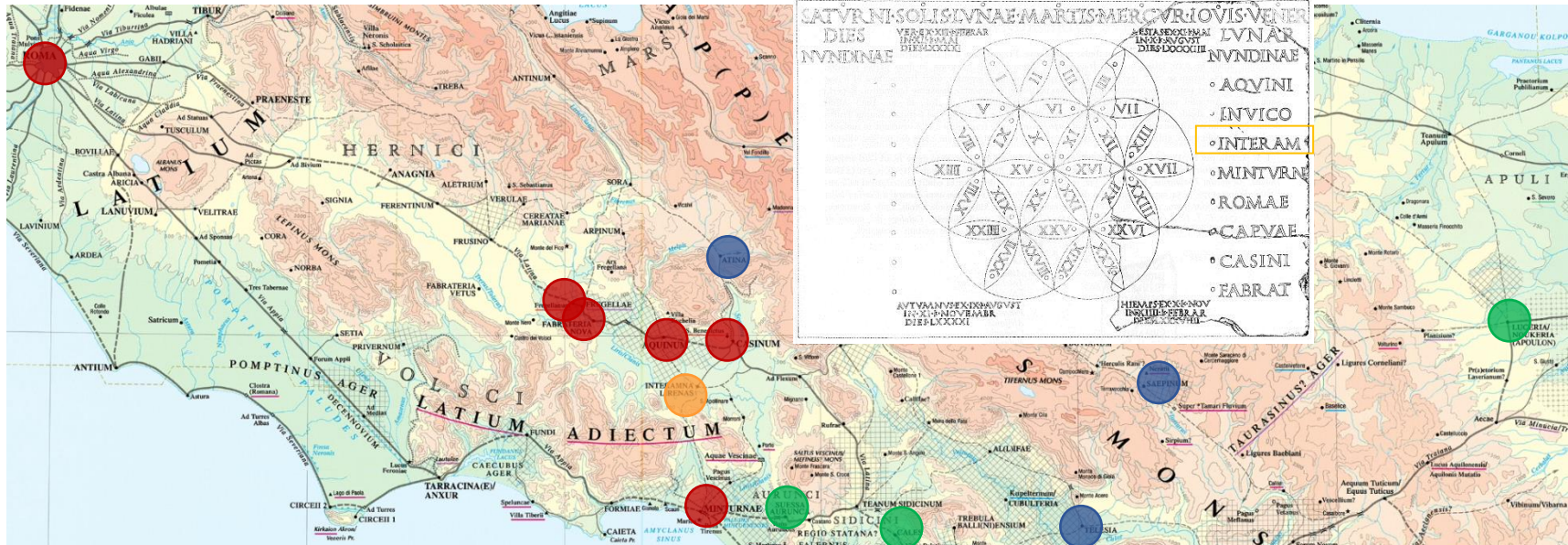


Fineware potsherds from Interamna Lirenas



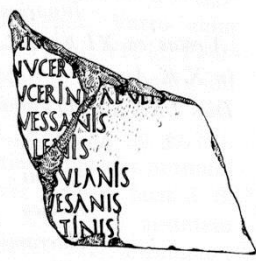
Percentage distribution across time

URBAN
RURAL



a

---]m Atinati[bus]
Interamna[tibus]
 Telesimis
 Saepinatibus
 5 Puteolanis
 Atellanis
 Cumanis
 Nolan[is]



b

[B]en[eventanis]
 Nuceri[nis]
 [L]ucerinis Apulis
 [S]uessanis
 5 [Ca]lenis
 [Sues]sulanis
 [Sin]uesanis
 [Cala]tinis

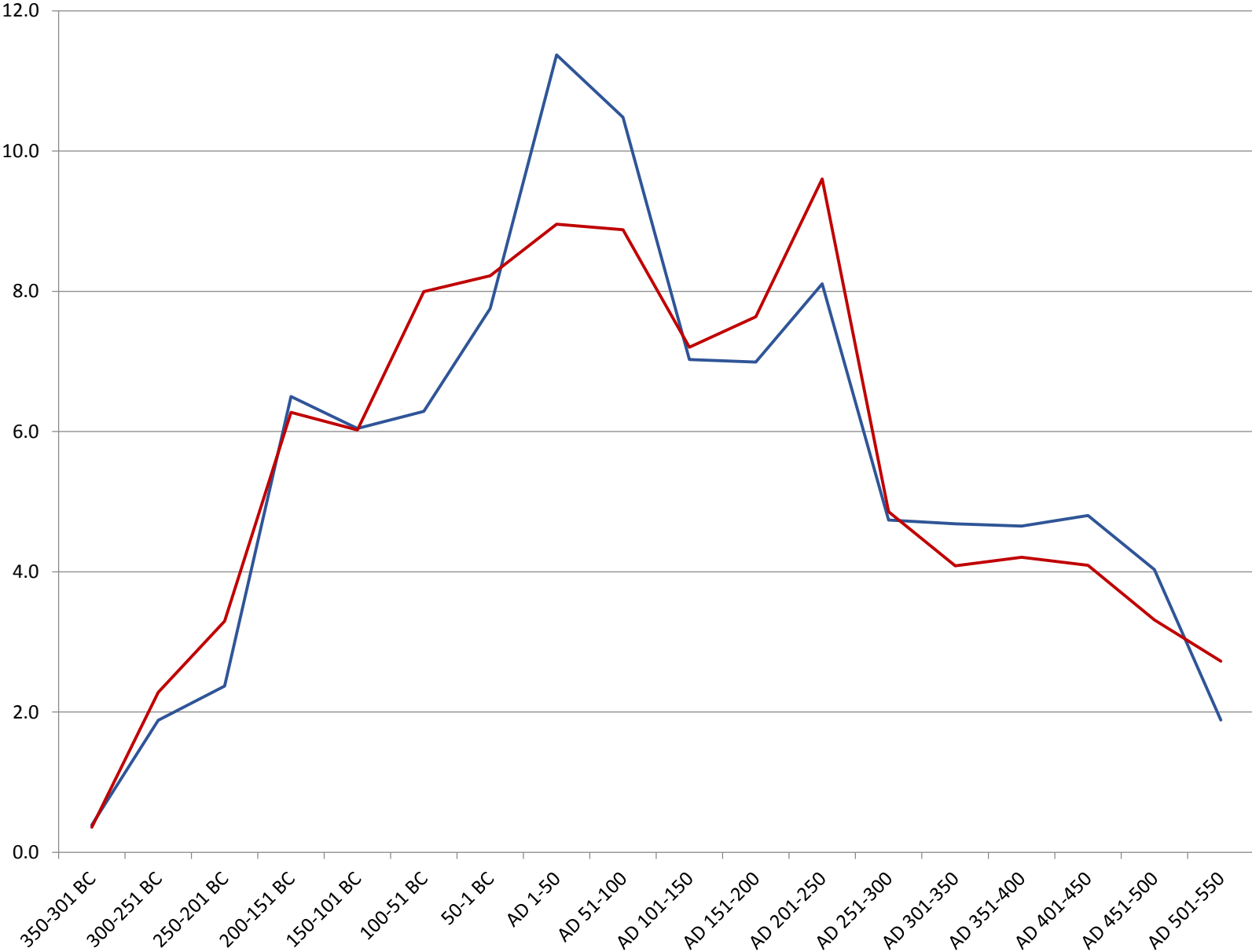
c

ALLIFANIS
 CEREATIS

Allifanis
 Cereatis



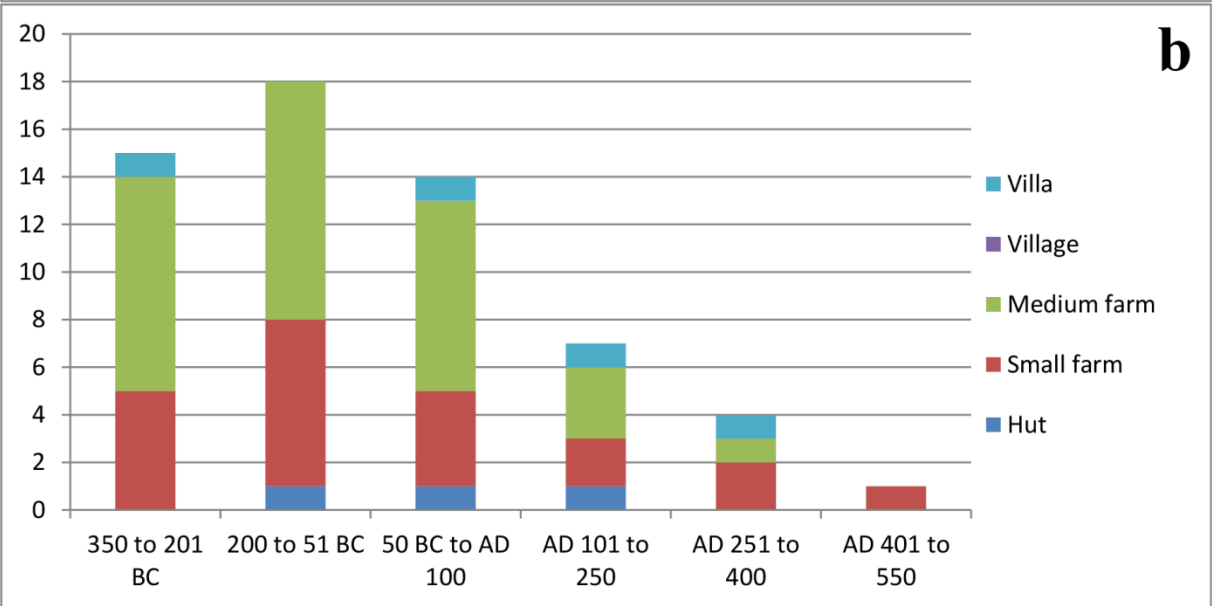
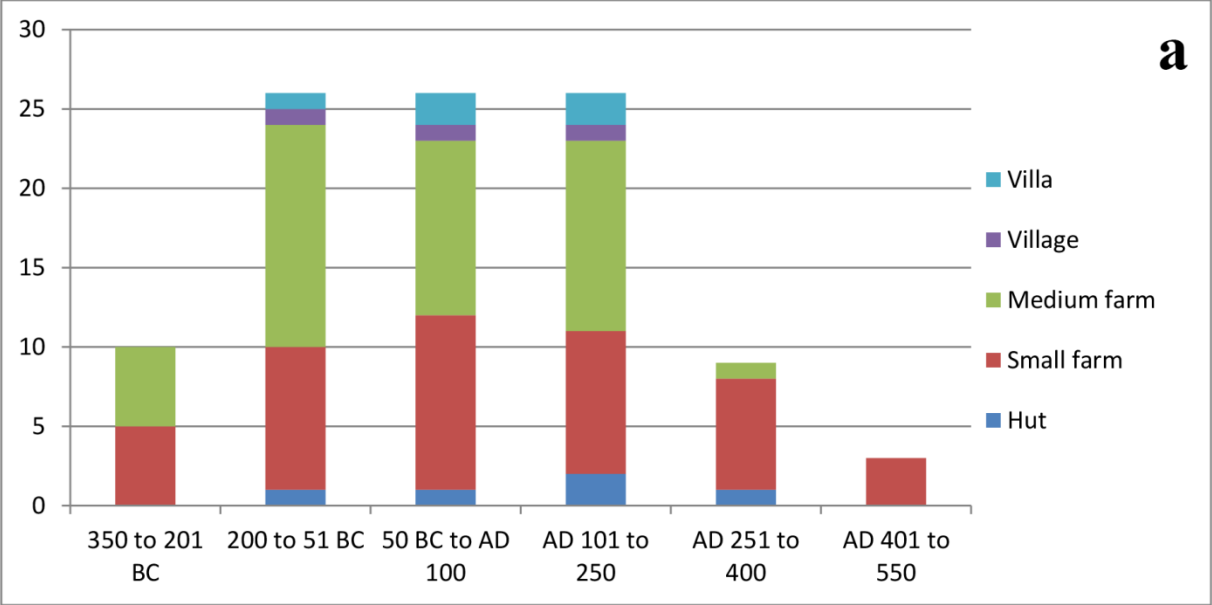
Commonware potsherds from Interamna Lirenas



Percentage distribution across time

- URBAN
- RURAL

Rural settlement patterns around Interamna Lirenas



Inside the library



series of pans with interior glaze-paint done in various shapes. They seem to have been imported.

A. KITCHEN WARE

I. Saucepans

Class 1

This is a thick-walled, relatively deep pan. The lower section has not been preserved, so that reconstruction of the total shape is not possible. There is a shallow groove that separates the rim and wall. The piece has been exposed to fire.

1 Fig. 1

Rim and wall fragment. Granular, orange-brown clay with minute mica fragments. Inner surface brown. Outer surface brown with black patches. Medium-poor manufacture, MPH 5.1 cm., Dia. 19.0 cm.

Class 2

The form of this piece is uncertain since only the rim and part of the handle are preserved. The

and the bowl has a more elaborate projecting rim.

3 Fig. 1

Fragment of rim, wall and small portion of floor. Gray-black to tan clay with stone and minute mica particles. Surface tan with portions fire-blackened. Medium manufacture. MPH 4.0 cm., Dia. 12.0 cm.

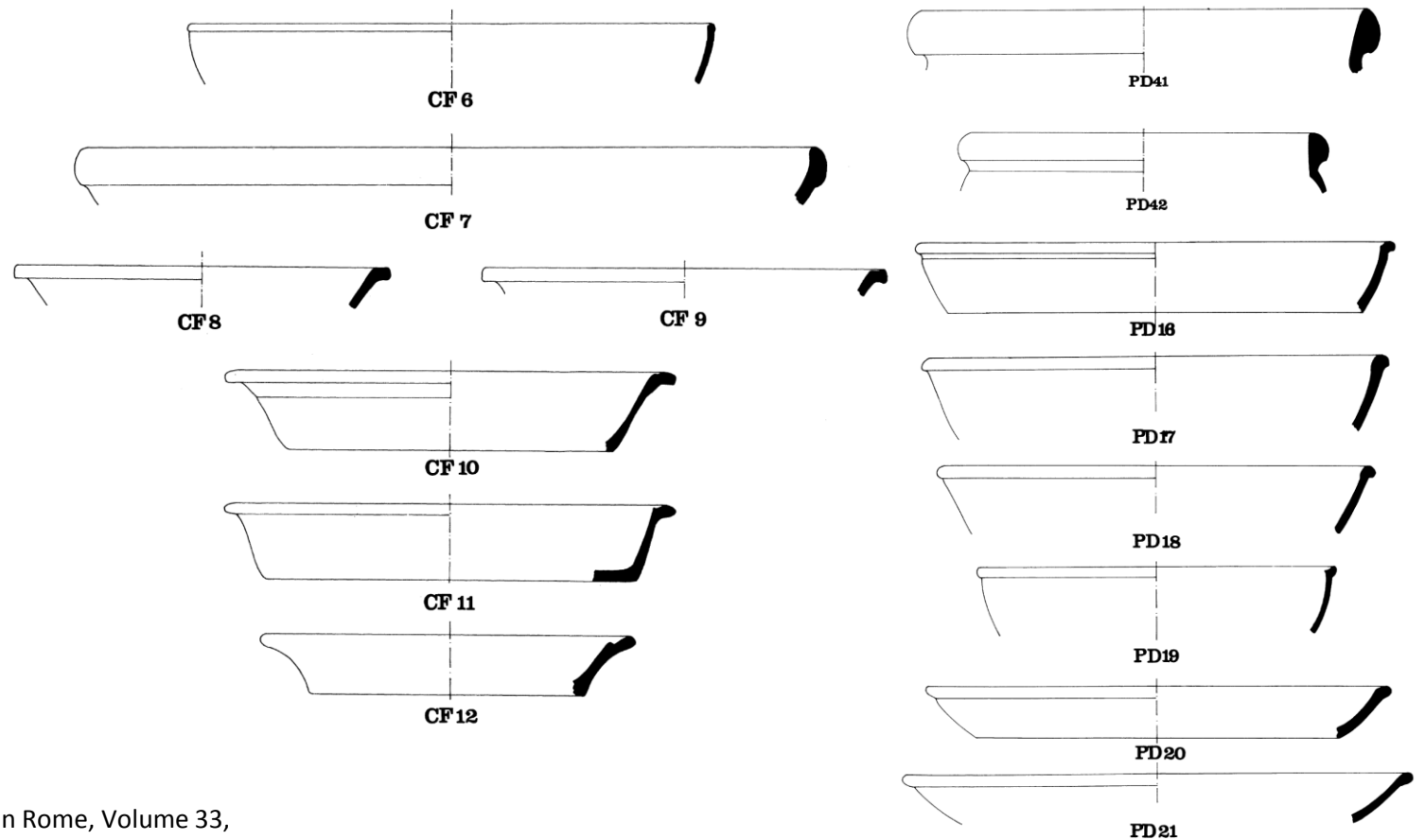
II. Round-Bottomed Pans

Class 1

This was a very broad-mouthed, probably relatively shallow pan. The rim projects outward and turns downward at the end. The inner portion of the upper wall points upward forming a separate lip, while a broad, shallow groove separates this section from the downward turned part. A small portion of an attached, flat piece on the upper surface of the rim is preserved. Perhaps this was part of an attachment for the handle.

4 Fig. 1

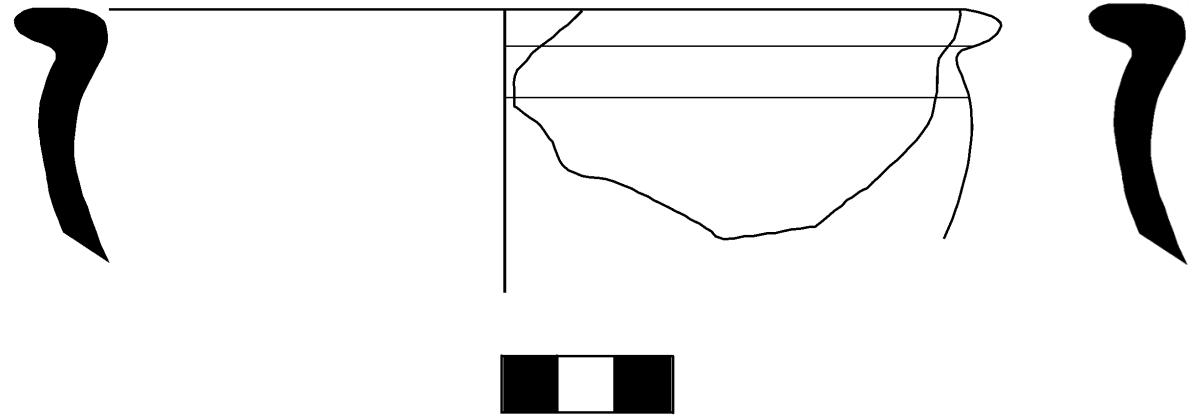
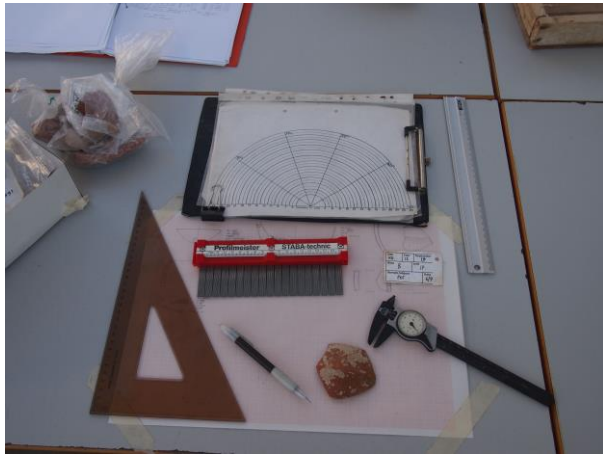
Fragment of rim and small portion of wall. Orange, slightly granular clay with gray-black stone



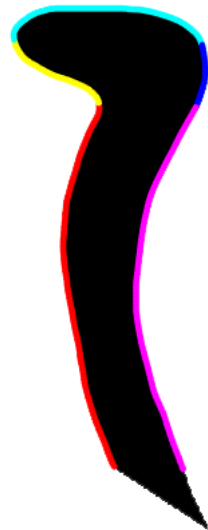
Cosa, the Utilitarian Pottery,

Stephen L. Dyson, American Academy Roma: Memoirs of the American Academy in Rome, Volume 33, American Academy in Rome, 1976

Workflow



FOR EACH SHAPE:

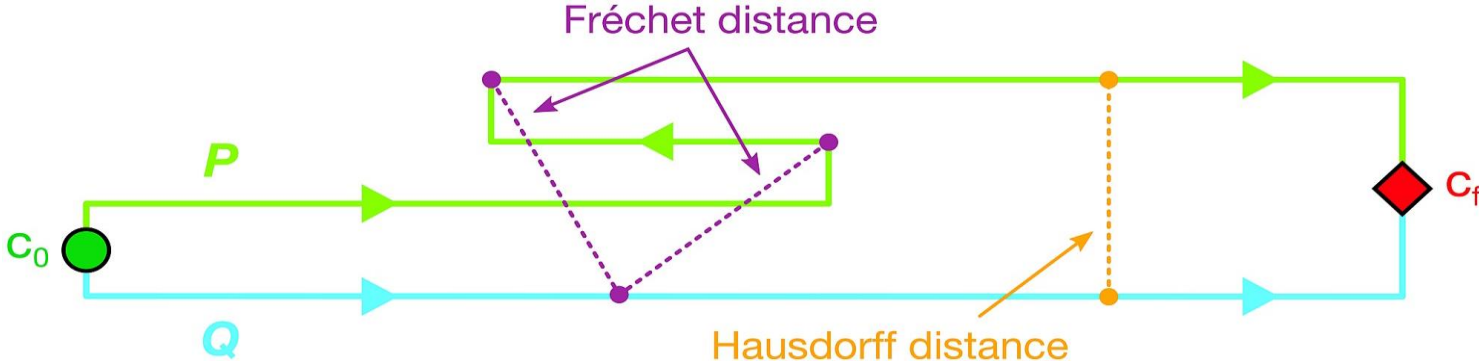
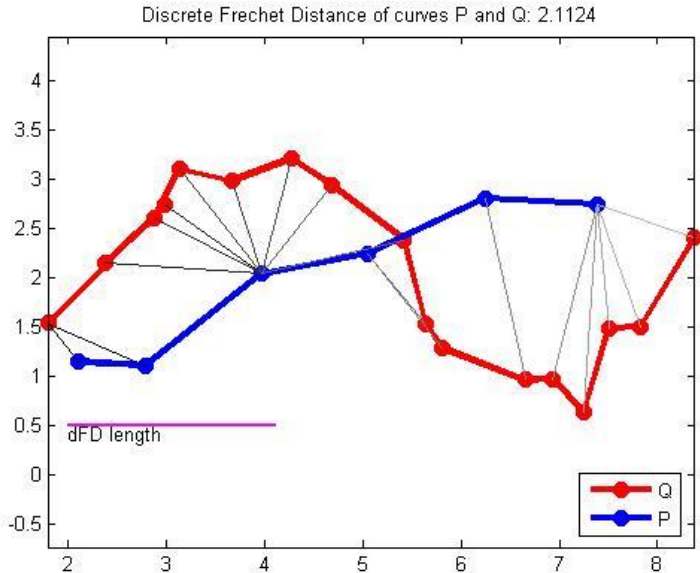
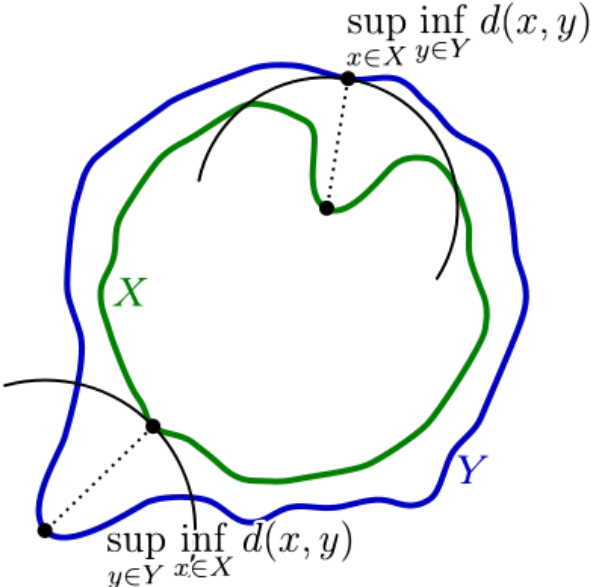


+ LABEL



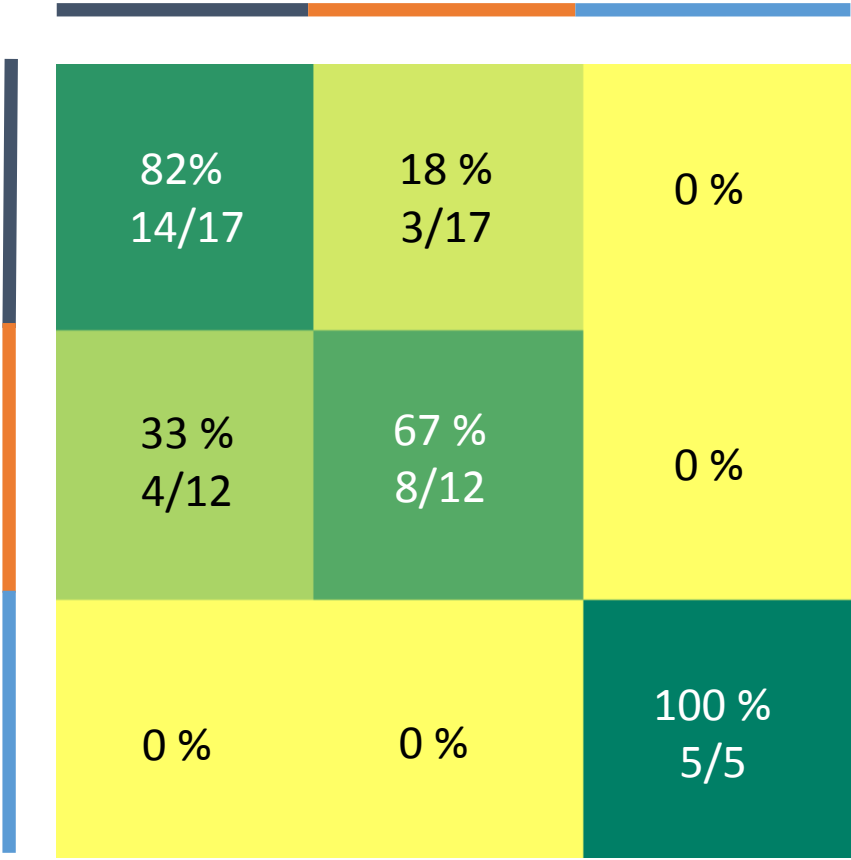
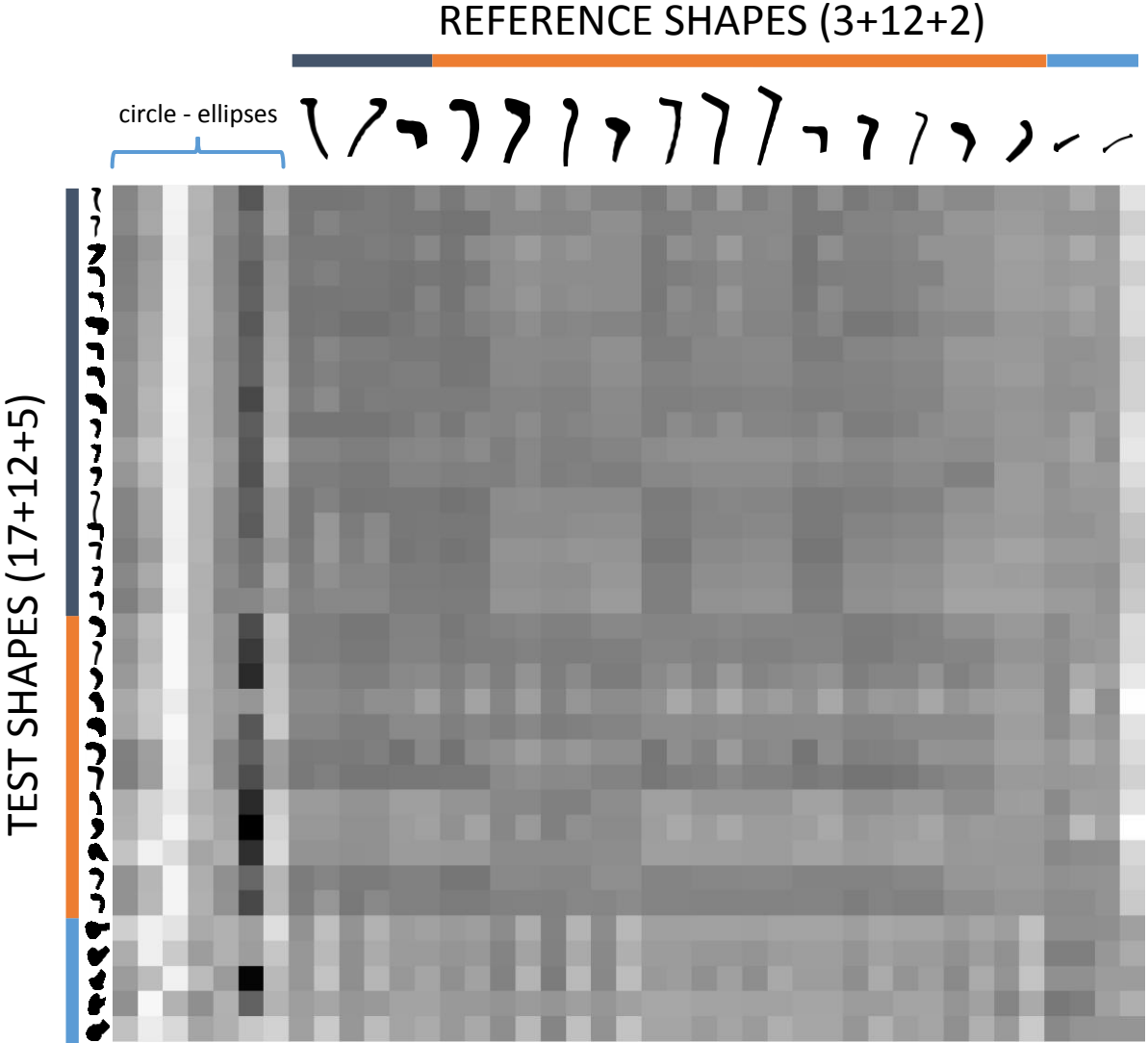
+ LABEL

Features



L. Seyler, Sean; Kumar, Avishek; Thorpe, M. F.; Beckstein, Oliver (2015): Comparison of Hausdorff and Fréchet distance. Two paths P (green) and Q (cyan) begin at state c_0 and end at state c_f with directionality indicated by the arrows.. PLOS Computational Biology. <https://doi.org/10.1371/journal.pcbi.1004568.g001>

Features Matrix and Confusion Matrix



Neural classifier for multiple class data (DTU Denmark)
3 classes, 2 layers

S. Sigurdsson et al., Outlier estimation and detection: Application to Skin Lesion Classification
 The 27th Int. Conf. on Acoustic, Speech, and Signal Processing, pp. 1049-1052, 2002 Vol. 1

A collection of various ancient pottery items, including a large central jar, several smaller vases, bowls, and a plate, arranged on a white surface. The items are made of reddish-brown clay and have different shapes and sizes. The text "Thank you for your attention!" is overlaid in the center of the image.

Thank you for your attention!