The Archaeology of Rome and the Roman provinces

Roman pottery

- Pottery is a key material in the dating and interpretation of archaeological sites from the Neolithic period onwards, and has been minutely studied by archaeologists for generations.
- In the Roman period, ceramics were produced and used in enormous quantities, and the literature on the subject, in numerous languages, is very extensive.
• “We are too often the victims of the great curse of archaeology, the indestructibility of pots”

• Finley, M 1959 *Technology in the ancient world. Economic History Review*, 2nd series, XII, 120-5.
- Amphorae
- Fine wares
- Coarse wares
- Lamps
- Ceramic Building Materials
- Fired clay or terracotta was also widely employed in the Roman period for architectural purposes, as structural bricks and tiles, and occasionally as architectural decoration, and for the manufacture of small statuettes and lamps.
Roman domestic pottery
Coarse ware / kitchen ware

- everyday pottery jars, dishes and bowls that were used for cooking or the storage and transport of foods and other goods and in some cases also as tableware, and which were often made and bought locally.
Flagons/ Jugs
Constricted necked jars
Jars
Wide Mouth Jar
Storage Jar
Lids/ Other
Black Burnished Ware
Mortaria

- One vessel type used in food preparation was closely linked with the spread of Roman culture and Roman cuisine: the *mortarium*.
- This was a robust shallow bowl with a thick, out-curved rim that made it easy to handle, often a pouring lip, and an internal surface deliberately roughened with a coating of grit or coarse sand during manufacture.

Romano-British *mortarium*, with the name of the manufacturer, Sollus, stamped on the rim. The gritted interior of the bowl has been worn almost smooth with use.
Mortaria

- It was used with a pestle to purée or pulverise ingredients in order to prepare elaborate and carefully seasoned Roman dishes; the Roman culinary tradition made extensive use of herbs and spices.
- The mortarium was the Roman equivalent of the food-processor, and is a real indicator of 'romanisation';
- In Britain, the first mortaria were being imported from Gaulish sources more than a generation before Britain became a Roman province in AD 43, indicating the growing influence of Roman culture in late Iron Age southern Britain, and perhaps the actual presence of immigrants from Gaul.
Nantwich Mortaria
Roman domestic pottery

- Fine ware / tableware
  - Fine wares were serving vessels or tableware used for more formal dining, and are usually of more decorative and elegant appearance.
  - Some of the most important of these were made at specialized pottery workshops, and were often traded over substantial distances, not only within, but also between, different provinces of the Roman Empire.
Beaker
Tankards/ Cups
Bowls and Dishes (Table Ware)
Modes of Production

- Household production
- Household Industry
- Individual workshop
- Nucleated Workshop
- The Manufactory
- The Factory
- Estate Production
- Military and official production
Material Traces of an economy

- Production
- Exchange
- Distribution
- Consumption

The manufacture of fine wares such as *terra sigillata* but also building ceramics took place in large workshop complexes that were organised along industrial lines and produced highly standardized products that lend themselves well to precise and systematic classification.
Forming

- Hand made
- Slow wheel
- Wheel
- Mould
- Slip casting
Kilns

Kiln components and types of superstructures

i. Surface clamp or bontise

ii. Single-chambered sunken kiln with permanent domed superstructure

iii. Surface-built kiln with open-topped temporary superstructure

iv. Sunken kiln with permanent open-topped superstructure

v. Sunken kiln with open-topped superstructure of temporary and permanent materials
Kilns

Types of supports for oven floors:

i. Inverted pottery vessel as support
ii. Free-standing pedestal
iii. Tongue-support
iv. Cross-walls
v. Pilasters or piers
vi. Corbels
vii. Continuous low internal ledge
viii. Low flattened kiln-top as support for bars (semi-sunken kiln)
ix. Holes or recesses in kiln wall
Kilns

Elevation

Longitudinal Section

General Plan

Note: The sections through the cross-flues where not in line are diagrammatically projected into the same plane.
1. Weathered clay brought up to workshop’s claystore

2. Clay transferred to pugging pit, as required

3. Pugged clay distributed to tile-makers working beside gangway

4. Tiles produced taken along gangway and out on to drying floor
The material Itself

a. Fabrics

• Term used to describe the pottery. Will comprise the clay itself and temper which may be added for technological or aesthetic reasons. A number of these are distinctive to the eye or under simple magnification.

• Observe: Hardness, colour, fracture and feel.

• Inclusions: identity, amount, sorting, shape, size.
Amphora found At Bassit
African
Cilician
N African Thin section
Cilician thin section
Chemical analysis

- Qualitative – what elements make up the sample?
- Quantitative – how much of each element is present
Amphorae

- Types of Roman amphorae, which were kept in racks
Description and function

- Amphorae, or amphoras, were used during Roman times to transport food on long and short distances. The content was generally liquid, olive oil or wine in most cases, but also garum, the popular fish sauce, and fruit sauce.
- As a container, an amphora was supposed to be strong, not too heavy, shaped in a way suitable for easy storage in the ship, and, at the same time, convenient for handling once arrived to its final destination.
- Usually, amphorae are two-handled terracotta containers with a globular/cylindrical body, a rim of various shapes, and a spiked or, less commonly, flat base.
- The spike was suited for a stable storage arrangement in the ship and it worked as a third handle in the process of emptying the container.
Ships

- At times the winds stopped, stranding cargo and crew. Ship captains lacked accurate charts and navigational equipment.
- Therefore, they stayed close to the coastline to navigate, and many vessels were shipwrecked.
- Archaeologists have found many sunken ships laden with trade goods that offer valuable clues about the lives of people of the Roman Empire.
• The first systematic classification of amphorae types was undertaken by the German scholar Heinrich Dressel.
Dressel classification

Dressel type 1B, an early Roman amphora

Key: 1: rim - 2: neck - 3: handle - 4: shoulder - 5: belly or body - 6: foot
History

- The first type of Roman amphora, Dressel 1, appears in central Italy in the late 2nd century BCE. This type had thick walls and a characteristic red fabric. It was very heavy, though also strong.
- Around the middle of the 1st century BCE the so-called Dressel 2–4 starts to become widely used. This type of amphora presented some advantages in being lighter and with thinner walls.
- Dressel 2–4 were often produced in the same workshops used for the production of Dressel 1 which almost suddenly ceased to be used.
- At the same time in Cuma (southern Italy) the production of the *cadii cumani* type starts (Dressel 21–22). These containers were mainly used for the transportation of fruit and were used until the middle imperial times.
Amphorae were wheel-thrown terracotta containers. During the production process the body was made first and then let it partially dry.

Then, coils of clay would be added to form the neck, the rim, and the handles. Once the amphora was completed, the interior was treated with resin in order to ensure a better performance in liquid storage.

Amphorae are often marked with a variety of stamps and graffiti. The function of these stamps are related to the entire life of the vessel. Stamps, graffiti and inscriptions provided information from the production cycle to the content and the commercialisation.
Fig. 8.8 Major amphora forms: a. Greco-Italic; b. Dressel 1A; c. Dressel 1B; d. Dressel 1—Pascual 1; e. Lamboglia 2; f. Dressel 2-4; g. Haltern 70; h. Dressel 7-11; i. Beltrán II; j. Oberaden 83; k. Dressel 20; l. Pélizchet 47; m. “Neo-Punic”; n. Africana II; o. Late Roman North African; p. Tripolitaniun I; q. “Spatheion”; r. Dressel 30; s. “Hollow Foot”; t. British Biv; u. British Bi; v. “Palestinian.”
Markings

- Signatures
- Tallies
- Graffiti
- Dipinto
A Dressel 20 amphora with examples of tituli picti and potters' stamps found at Monte Testaccio
Dog Print, Bulgaria
Indiction Stamp
- Stamp 14 - Ι NIMAS (Lauffray, J. 1944; no 2471a and b, Bardhill 2004, 302) stamps dated AD 413-5 from the Theodosian church of St Sophia, Constantinople and on a stamp dated AD 430/1 from the palace of Antiochus. Two different dies were observed to have been used for this stamp, reads ιν(δικτισσονος) ιΜα( ) S.

- Stamp 15 ΙΝΙΒΑΓΡΑ (no 8972a, Bardhill, 2004, 204.) A stamp dated AD 429-33 AD from the palace of Antiochus reads ιν(δικτισσονος) ιβα ( ) Γρα( ).
Olive oil
Olea Europea Sativa
Roman economy & government

- For all of its major accomplishments, Ancient Rome never developed a complex economy. The Roman economy was mainly concerned with feeding the vast number of citizens and soldiers who lived throughout the Mediterranean region.
- Therefore, agriculture and trade dominated the economy, supplemented by small-scale industry.
- The farmers in Italy grew grains, olives, and grapes.
- **Olive oil and wine were some of Italy’s leading exports.**
- Roman farming methods were fairly primitive and not very productive. Roman farms produced few crops and required many people to do the work. Farmers were also heavily taxed.
Olive summary

- Spain, Tunisia Tripolitania (Libya) North Syria
- Other locations but not so intensive
- Food c. 20L a year; lasts a year before going rancid
- Also used on body, perfumes, medicines, soap, light
- Monte Testaccio – 40-50 million discarded amph, 80% dressel 20 amphora, 2000 billion l.
Segilla, Syria
Wine

- Though most provinces were capable of producing wine, regional varietals were desirable and wine was a central item of trade.
- Shortages of wine were fortunately rare.
- The major suppliers for the city of Rome were the west coast of Italy, southern Gaul, the Tarraconensis region of Spain, and Crete.
- At the retail level, taverns or speciality wine shops (vinaria) sold wine by the jug for carryout and by the drink on premises, with price ranges reflecting quality.

Gallo-Roman relief depicting a river boat transporting wine barrels, an invention of the Gauls that came into widespread use during the 2nd century.
Wine
Fish Sauce
Garum

• OLD: garum, -i (n) a highly esteemed fish sauce, prepared originally from the garos (unknown fish) but later chiefly from the scomber or mackerel
Garum

- Cited by everyone!
- Varro
- Horace
- Celsius
- Seneca
- Petronius
- Pliny the Elder
- Sextus Pompeius Festus

- Martial
- Ulpius
- Columella
- Cato
- Persius
- Quintilian
- Fabius Pictor
- CIL 15.4709 & 4.2592
Lucius Tettius Africanus’s finest fish sauce from Antipolis; (product) of Africanus
Dressel 1 to 6: wine amphoras
Dressel 1: Roman wine amphora, 129 B.C. to 13 A.D.
Dressel 2: Roman wine amphora, 16 B.C. to 29 A.D.
Dressel 3: Roman wine amphora, 28 to 146 A.D.
Dressel 4: Roman wine amphora, 4 B.C. to 24 A.D.
Dressel 5: Roman wine amphora, 12 B.C. - holotype
Dressel 6: Roman wine amphora, 36 A.D. - holotype
Dressel 7, 8, 9, 10, 11: betic amphoras for salted fish (Hispanic)
Dressel 8: 1st front century J.C.
Dressel 12: betic amphora for salted fish (Andalusia)
Dressel 13, 14, 15: betic amphoras for salted fish
Dressel 20: oil amphora, betic, 2nd-3rd century A.D.
Dressel 26, 27: 3rd century A.D. and later
TYPES OF WARES FOUND
IN VALETUDINARIUM

- Jugs: 21%
- Terra sigillata: 10%
- Bowls: 15%
- Dishes: 2%
- Beakers: 23%
- Amphorae: 29%
Amphorae

Proportions of Amphorae on Different Site Types

- A: Binchester, Flavian-Trajanic
- B: Binchester, Antonine-C4
- C: Thornborough Farm, Catterick
- D: Brathirg Fort, Flavian
- E: Carlisle, Castle St
- F: Alcester, Gas House Lane
- G: Ashall, Oxon
- H: Salford Priors, Warks
- I: Tort Hill E., Tort Hill W., Vinegar Hill & Normans Cross, Cambs
- J: Ling Hall, Warks.
- K: Billesley Manor, Warks.
- L: Crewe Farm, Warks.
- M: Btrfsford Grange, Warks.
- N: Princeshurpe, Warks.

Military sites
Small towns
Villa
Basic rural sites

%
Fine ware
Terra sigillata or red-gloss ware
Terra sigillata

- Although there were many types of fine pottery, for example, drinking vessels in very delicate and thin-walled wares, and pottery finished with vitreous lead glazes, the major class that comes first to mind is the Roman red-gloss ware of Italy and Gaul made, and widely traded, from the 1st century BC to the late 2nd century AD, and traditionally known as terra sigillata.

- These vessels have fine, fairly hard and well-fired buff to pink fabrics, with a naturally glossy surface slip ranging in colour from light orange to quite a bright red.

- The variations in the colour and texture of both body fabric and slip, as well as the vessel-shapes and the designs on the decorated forms can enable a trained student to identify source, date and often individual workshop quite accurately.

- Decorated vessels a substitute for more expensive metal (silver) vessels
Terra sigillata

- Arretine ware, made at Arezzo in Tuscany, was the pre-eminent type of fine pottery in the 1st century BC and early 1st century AD, and was succeeded by samian ware, manufactured in a number of centres in Gaul, modern France and Germany.

- African Red Slip (ARS) ware belonged to the same tradition, and continued to be made much later than Italian and Gaulish sigillata, right through to the Islamic conquest. ARS in turn influenced the production of Phocaean red slip, which is common in the Eastern Mediterranean and also appeared occasionally as far west as Southern France and Britain.

- Most of these wares were widely distributed and produced on an industrial scale (the largest kilns could fire up to 40,000 pieces at a time), and undoubtedly using a high degree of specialisation within the workshops.
Hellenistic Black Gloss Tradition
Terra sigillata

- The names of many potters and factory-owners are known from the potters' marks frequently applied to fine wares, and can be highly informative.
- Gaulish workshops of Rheinzabern, and was also widely used on other pottery types.
- Plain sigillata table vessels, which included large platters, shallow dishes in several sizes, slightly deeper bowls, and small cups, were made on the wheel using a range of templates to create very precise profiles.
- The sizes were also standardised, which would have facilitated the firing, storage and transport of the huge numbers that were made.
Terra sigillata

A typical plain African Red Slip dish with simple rouletted decoration. 4th century AD
Terra sigillata

Moulds for *terra sigillata* bowls of form Dragendorff 37, made at the East Gaulish factory of Rheinzabern
In 1895, the German scholar Hans Dragendorff produced a classification of vessel shapes in Roman red gloss pottery that is still used (as e.g. "Drag. 27" or "Dr.27" to refer to the small biconvex-profiled cup).
Producer stamps
Sigillata Red Gloss wares

- C1 BC move from ‘Hellenistic’ Black gloss to Red Gloss
- Eastern Sigillata a – c.150BC – LC2/ EC3AD (AD10 – 200 influenced by Italian forms)
- Arrentine c. 40 BC – C. AD 50
- Eastern Sigillata AD 1 -150
- Southern Gaulish AD 40 -110
- African Red Slip LC1 - C7/8
- Central Gaulish AD C2
- Eastern Gaulish AD MC2 – C3
Eastern Sigillata A (ESA)
ESA Chronology

- Starts somewhere before 150 BC
- Early Transitional Black gloss phase
- Wide spread distribution after 50 BC
- Decline starts end Augustan Period (AD 20), replaced with Arratine/ Italian TS
- Possible revival Mid –late C1 AD (evidence from Pompeii)
- Short lives as ESB2 (Adriatic source) soon replaces.
- Does not last beyond Antonine period (C2) in core zone.
ESB

- Source: Asia Minor (Tralles)
- Mainly in Aegean
- 1AD – c.AD 150
- Founded by C. Sentius, who has stamps at Arrezzo (Arratine) and Lyons (SG Samian)
Italian Terra Sigillata

- Now known to come from several sources:
- Arezzo, Pisa, Tiber valley, Pozzuoli most important.
- Red gloss introduced AD 40-30.
- Diverse range of forms until AD 40 – 50 when stagnation sets in.
- Dates in the west come from short lived military sites.
Terra sigillata

- A South Gaulish samian bowl of form Dr.37. Late 1st century AD.
Terra sigillata

- Central Gaulish samian vessel, Dr.30, with the name-stamp of Divixtus. Late 2nd century AD.
Distribution

- Quickly exported to Gaul, Spain, Rhineland
- By 15 – 10 BC found in the Aegean
- Then Syria, Palestine Egypt
- By 10/20 AD at Arikamedu, India
- Forms varies in west and eastern export markets e.g. Cup form Haltern 8 dominates in west, but rare in East.
- Loose market in mid 1st century due to rise of Aegean production
Samian / Gaulish TS

- Very well studied, with a good understanding of fabrics, of development of forms over time (e.g. Shift from Plates/Platters to Dishes then Bowls).
- A good body of work on identified potters and workshops.
- Dating can be refined to around +/- 25 years.
Gaulish Terra Sigillata Kilns
Southern Gaul

- La Grafesenque – Arratine imitations start at AD1/10. Reasonable imitation starts AD20
- Ateius moves to Lyon
- AD 35/40 forms develop – simplifications of Arretine types
- Also made at Montans and Banassac
- Peaks perhaps AD 80-100, lower quality
- Finishes AD 110 – Reasons not clear
Central Gaulish
Detail of Decoration

Samian SF D8
Dragendorf 37 Decoration

- D8. Form 37, Central Gaulish. Complete bowl, showing freestyle hunting scene in the style of Cinnamus
- ii, with his ovolo (Rogers B233) and bush space filler (Rogers N15). Types are the horseman (O.245), panther (O.1507), hind (O.1822l), stag (O.1720), small lion (O.1421) and bear (closest to O.1633L). A stamped bowl from Lezoux (Rogers 1999, pl. 32, 45), shows the same ovolo, bush, horseman, stag and hind. c.AD 150-180. [1207] (1225)
Eastern Gaul

- Trier, Rheinzabern, Argonne.
- Minor centres in AD50
- Sinzig, Trier Had/Ant; Rheinzabern Early Ant – not found on Antonine wall
- Rh and Trier main C3 supply to Britain – reaches Chester (6%) but more common on East coast (15%)
African Red Slip

- ARS (African Red Slip) ware was the most widely distributed representative of the sigillata tradition in the late-Roman period. (Occasional imports of ARS have been found as far afield as Britain in the 5th–6th centuries.
- It was manufactured in the province of Africa Proconsularis (approximately modern Tunisia), and similar forms and fabrics were made for more local distribution in Egypt, which had its own very active and diverse ceramic traditions in the Roman period.
ARS

- A Roman tradition fine ware that goes on, originating from Hellenistic casseroles.
- Fine ware starts AD60-80, North Tunisia,
- Starts later in Central (AD200) and Southern Tunisia
- Starts to dominate C2-EC3 in West Med
- C3 – massive penetration of Eastern market replacing ESA.
- Ec4 vandal occupation – some new form
- C5 – declines in west (end of Annona)
African Red Slip

- Greece – dominant LC3 – EC5, then Phocaen red slip takes over.
- Mid C5 – levant sees rise in Cypriot red slip
- AD 533 reconquest – production limited to N Tunisia
- End in C6 – EC7
Conclusion

- Fineware pottery has a long history of study.
- Precise details of chronology and distribution help map changes and connections in the Roman Economy.
- The changes in the range of forms are indicative of wider social changes.
Lamps

- Artificial lighting was commonplace in the Roman world.
- Candles, made from beeswax or tallow, were undoubtedly the cheapest means of lighting, but candles seldom survive archaeologically.
- Lamps fueled with olive oil and other vegetable oils survive in great numbers, however, and have been studied in minute detail.
- Some Roman lamps were made of metal, and could be of highly elaborate forms incorporating statuettes and multiple nozzles.
- Fired clay was the most usual material, and the majority of small, probably inexpensive, clay lamps had a single nozzle for one wick, and therefore one flame.
- Most of these clay lamps were shaped using moulds in workshops that turned out large numbers of standardised products.
Lamps

- Some of the most popular forms incorporated a central *discus*, a circular area usually around 4–6 cm. in diameter, that incorporated the filling-hole and could be ornamented with pictorial motifs in low relief.
Lamps

- Makers' or workshop names were normally placed on the underside of the lamp, and are common on the usually undecorated lamps known as *Firmalampen* ('factory lamps'), a type which was popular in the military zones of the north-west Roman provinces during the 2nd century AD.

- One well-known name is that of *Fortis*, and his products were evidently copied outside his own workshop in Italy – or perhaps Fortis had his own branch factories in the provinces.
Lamps

- Italian lamp in the shape of a foot, with a siren or sphinx handle

- Two Roman Firmalampen. The one on the left was made in Colchester, and that on the right in Gaul.
Lampen aus Vindonissa.

Ein Beitrag zur Geschichte von Vindonissa und des antiken Beleuchtungswesens

Siegfried Loeschke

Bibliographie der Fremdsprachenwissenschaft zu Berlin

Tegula and imbrex roofing tiles
Two manufactured materials were of great importance in Roman architecture: concrete and fired clay in the form of structural bricks and tiles, and to a lesser extent, in architectural decoration.
What is CBM
Roof tile styles

Laconian

Sicilian

Corinthian

Tegula

Imbrex
Roman Innovation
Housing - Insulae

- Large apartment buildings housed most of the population of a Roman city.
Stamped ceramic pipes

J. Kolendo, T. Kowal, Stamps on ceramic pipes from Novae (Moesia Inferior), Novensia 22 2011, pp. 67-76.