

ATHENS AND ROME: LIFE AND CULTURE IN CLASSICAL ANTIQUITY

Lecture 22 – Ancient Economy

CLCS4007

Dr Matthew Cobb

Understanding the Ancient Economy

Economic Theory

- ▣ Gift-giving, redistribution, and free market exchange – Karl Polanyi.
- ▣ Theoretical debates:
 - **Substantivism** – economy as socially embedded.
 - **Formalism** - rationality and utility.
 - **Primitivism** – fundamentally different economy.
 - **Modernism** - indications of sophisticated practices and economic rationality.

Economic Growth

- Economic growth can be caused either by an increase in population size or by an increase in productivity.
- Population static, productivity increases,
 - Due to techniques/technology,
 - Due to longer working hours.
- Productivity static, population increases.
- A combination of increased population and productivity.
- Malthusian Trap – growth limited by subsistence.

Division of Labour



Autarky /
Autonomy

Specialisation
and
interdependence

“In the lives of men too there is a great difference. The laziest are shepherds, who lead an idle life, and get their subsistence without trouble from tame animals; their flocks having to wander from place to place in search of pasture, they are compelled to follow them, cultivating a sort of living farm. Others support themselves by hunting, which is of different kinds. Some, for example, are brigands, others, who dwell near lakes or marshes or rivers or a sea in which there are fish, are fishermen, and others live by the pursuit of birds or wild beasts. The greater number obtain a living from the cultivated fruits of the soil. Such are the modes of subsistence which prevail among those whose industry springs up of itself, and whose food is not acquired by exchange and retail trade- there is the shepherd, the husbandman, the brigand, the fisherman, the hunter.” – **Aristotle *Politics* 1.8.**

Specialisation

“We take pleasure in perfumes and purple garments, but we regard dyers and perfumers as men unworthy to be free and as mean artisans. Antisthenes was therefore quite right in saying, when he was told that Ismenias was an excellent flute-player, ‘He is good for nothing, for he would not otherwise be such a good flute-player’. Similarly, Philip, when his son was playing the cithara at a banquet with much charm and skill, asked him: ‘Are you not ashamed to play so well?’ The point of this is that it is enough for a king to listen in his leisure time to others playing the cithara and he does sufficient honour to the Muses if he attends as a spectator competitions which involve others.... No young man of good birth having seen the Zeus of Pisa or the Hera of Argos desired to become Pheidias or Polycleitus, nor Anacreon, Philemon or Archilochus for having been delighted with their poems. A work may delight us with its charm, but there is no need to regard its creator with admiration.” - **Plutarch *Pericles* 1.4-2.1.**

Manufacturing

Scale: large manufacturing

- ▣ There were over **100** slaves in Lysias and his brother's shield workshop (**Lysias 12.8, 19**).
- ▣ Pasion's shield workshop – numbers unknown (**Demosthenes 36.11**).
- ▣ **32 or 33** in Demosthenes' blade workshop; 20 making couches (**Demosthenes 27.9**).
- ▣ **9 or 10** in Timarkhos' leather workshop (**Aischines 1.97**).
- ▣ These are **the largest four** manufacturing establishments known from Classical Greece.

“His father left him a fortune which another man would have found sufficient for the service of the state also. But Timarchus was not able even to preserve it for himself. There was a house south of the Acropolis, a suburban estate at Sphettus, another piece of land at Alopeke, and besides there were nine or ten slaves who were skilled shoemakers, each of whom paid him a fee of two obols a day, and the superintendent of the shop three obols. Besides these there was a woman skilled in flax-working, who produced fine goods for the market, and there was a man skilled in embroidery. Certain men also owed him money, and there were house furnishings.” - *Aischines Against Timarchos* 97.

Scale: normal manufacturing/ service sector

- Normal scale was a single self-employed worker, with or without a slave assistant (**Aristotle *Pol.* 1260; Lysias 24**).
- Make to order (not make and display/ store).
- Customer often supplied the raw material and the artisan was paid for his/her work on it,
 - E.g. customer provides lump of metal, goldsmith fashions it into wreath - (Archimedes and the *eureka* story).

Pottery to Order?

- ▣ Were some made for export – Etruscan themes?
- ▣ Many classical themes.



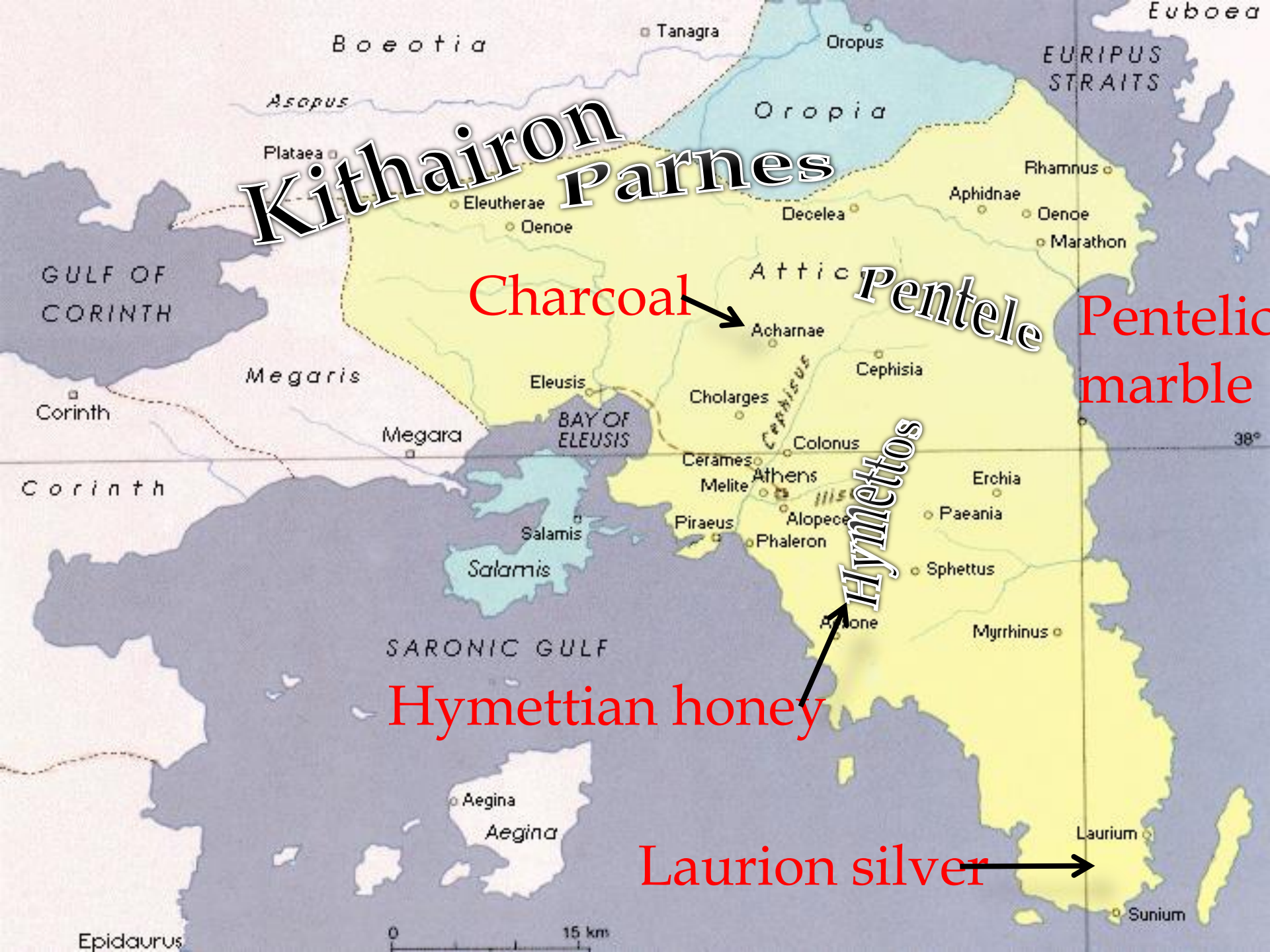
- Large numbers of Attic vases found in Etruria (North Italy).
- Found in chamber tombs where they were carefully deposited.

Charcoal Production



- Some sites are invisible (or nearly so) archaeologically, e.g. Akharnai, the biggest deme by far (Bouleitic Quota = 22; contributed 3000 hoplites to the army, Thuc. 2.20), famous for charcoal production. It is not yet located on the ground though the general area is clear.
- Aristophanes used the Akharnians to represent hard warlike country men in contrast to soft city types. Charcoal-burners risked self-cremation in the course of their daily work.

Mines and Quarries



Kithairon
Parnes

Charcoal

Pentelide

Pentelic
marble

Hymettos

Hymettian honey

Laurion silver

Laurium Silver Mines

- ▣ Athens was blessed with a polymetallic region very rich in lead-silver and copper ores;
 - c. 150 sq. miles, south-east corner of Attic peninsula
 - Mindat.org lists 433 different minerals found in this region.
 - Main silver ores were galena (PbS) and cerrusite (PbCO₃).

There are ten *poletai*, one appointed by lot from each tribe. They lease out all the leasing and sell the mines and taxes... in the presence of the *boule*. And they ratify the granting of the mines to whoever the *boule* selects, both those ready to be worked which have been sold for three years, and those which have been given up and sold for ten years." – Aristotle *Athenian Constitution* 47.2.

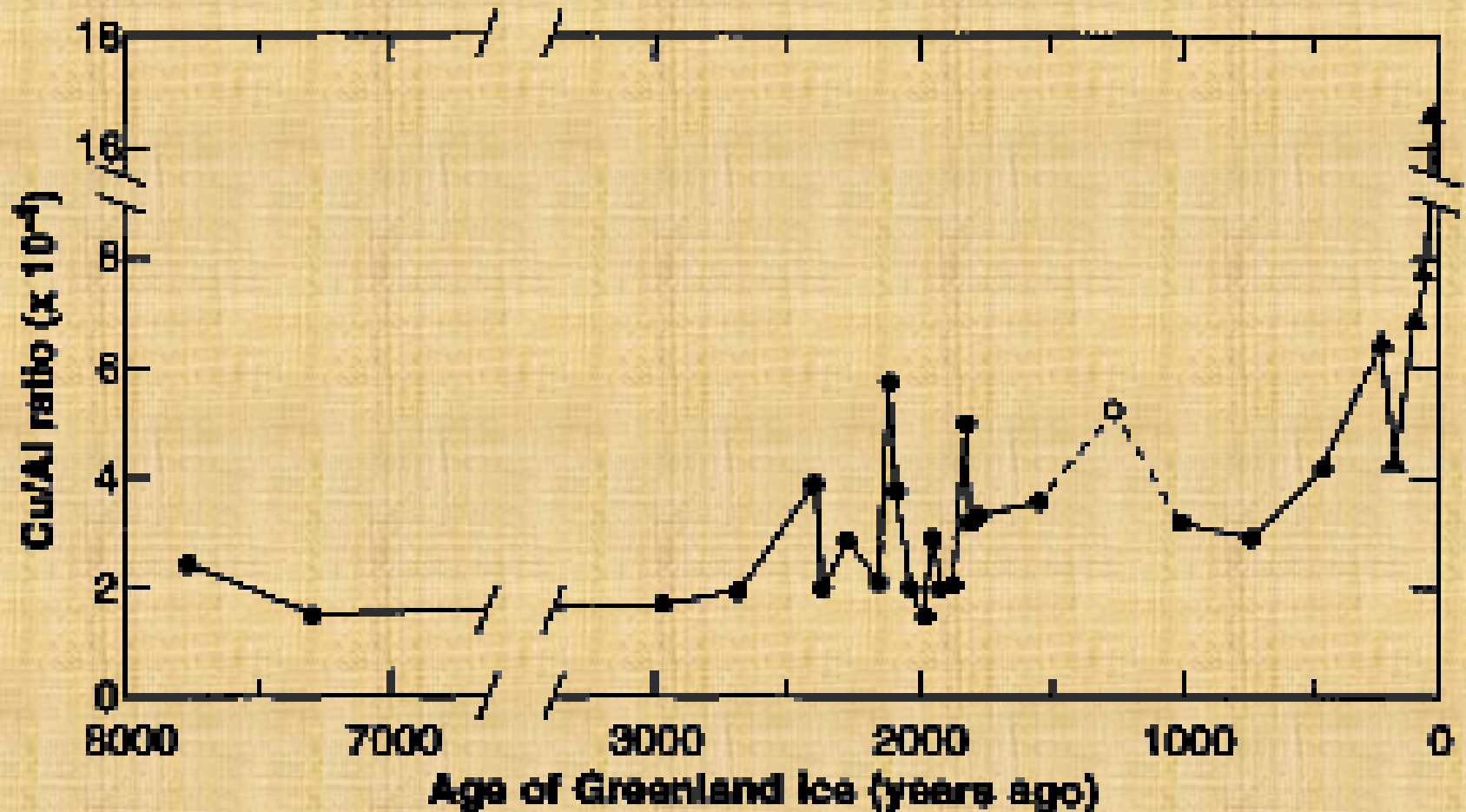
Mining and Refining

“They [the Athenian’s] were deprived of the whole area of their country; more than 20,000 slaves, the majority of whom were skilled workers, deserted...” – **Thucydides 7.27.** (Spartan occupation of Decelea).

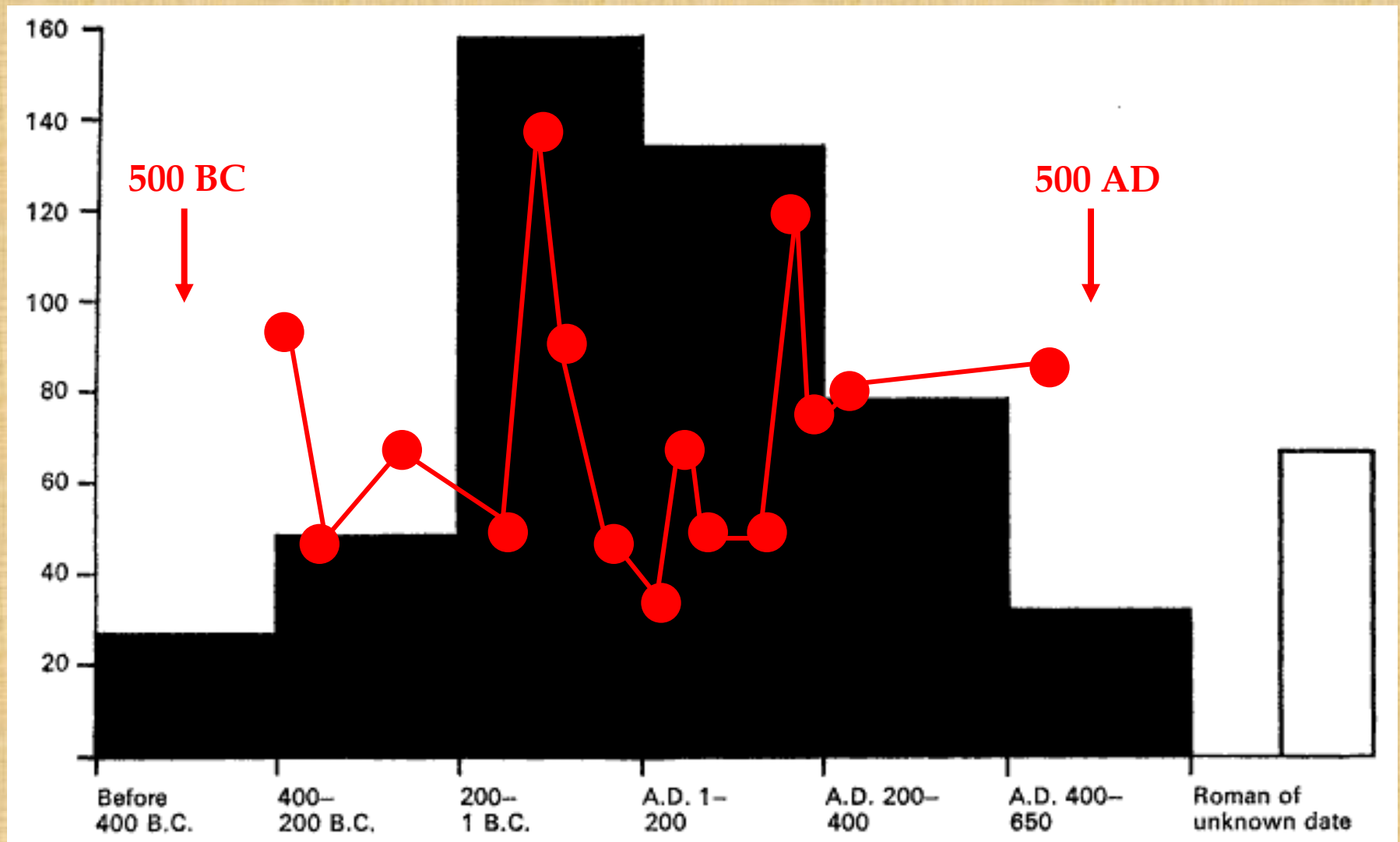
- *Ergasterion* – workshop.
- Need to wash ores.
- Need to smelt ores.
- On average, c. 16 kg material removed per 4 gr. silver (+ 2 kg lead) produced.



Changes in Cu/Al rate in Greenland Ice (from Hong *et al.* in *Science* 272)

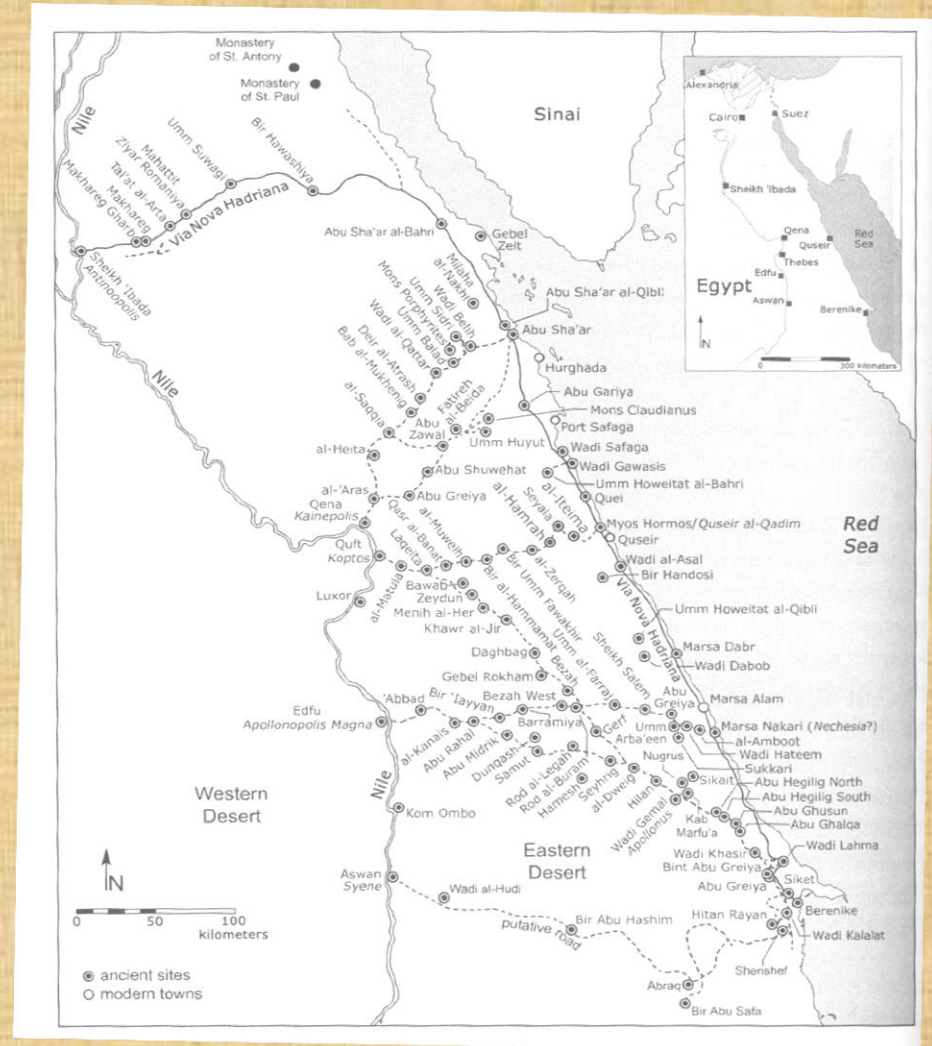


Hopkins and Hong *et al.* superimposed

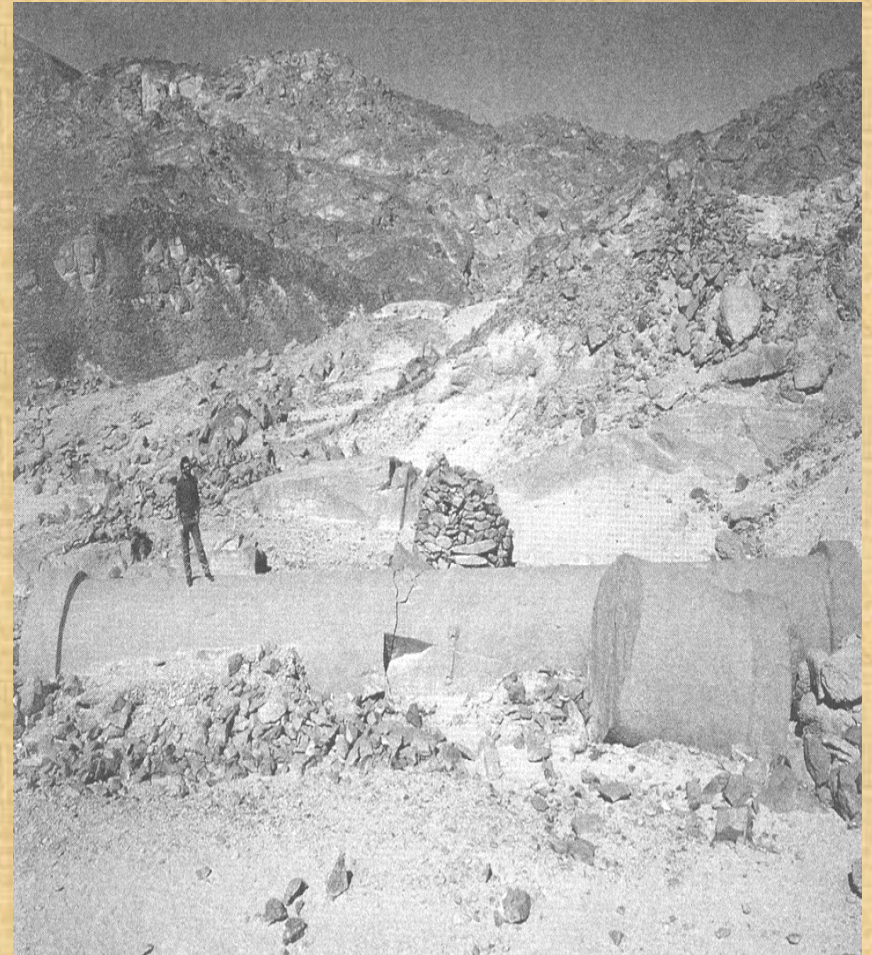


Eastern Desert of Egypt

- Earlier scholarship had assumed workers at quarries slaves.
- Ostraka from Mons Claudianus reveal pay for workmen between 28-47 drachmas.
- Desiccated fruit seeds, and animals + fish bones at Mons Porphyrites.



- ▣ Huge columns moved via the use of wagons pulled by camels/donkeys.
- ▣ Transported up Nile to Alexandria.
- ▣ Used in imperial building projects, e.g. Porphyry (Temple of Romulus) and Granodiorite (Basilica of Trajan).



Abandoned column at Mons Claudianus (Egypt).

Coinage and Money Supply

Athenian Coinage

- ▣ Athenian silver coinage - 98% pure - compare Sterling silver, 92.5%
- ▣ Guaranteed purity and weight – indicated by the *type* (emblems) stamped on the coin – meant that lumps of this precious metal could be unit counted, instead of weighed and tested as required by bullion or plate
- ▣ 1 talent = 6000 drachmas.
- ▣ 1 mina = 100 drachmas.
- ▣ 1 drachma = 6 obols.
- ▣ 2-3 obols = a day's pay in 5th C BC law-courts.



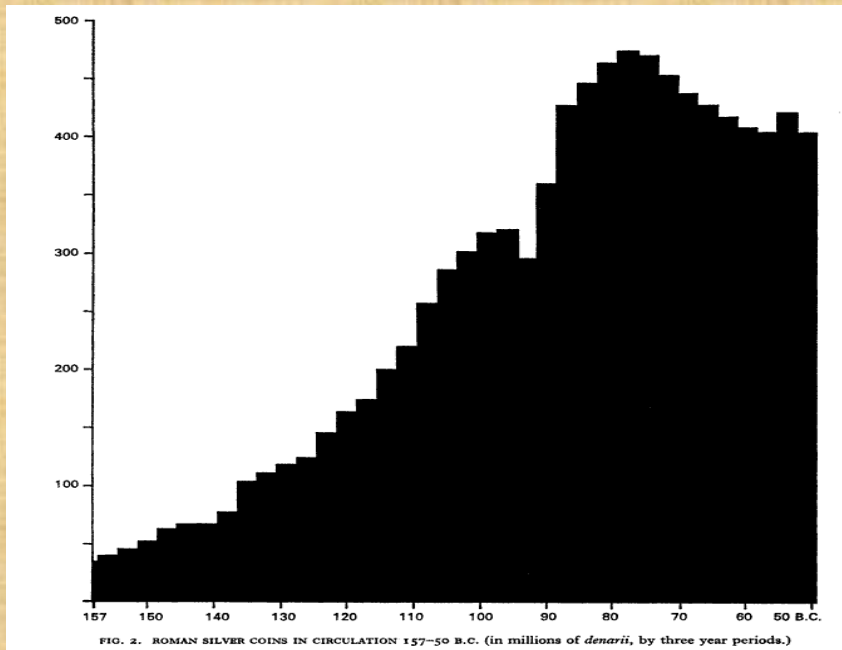
Roman Coinage

- Gold - Aureus = 100 sesterces.
- Silver – Denarius = 4 sesterces.
- Sesterce = 4 asses.
- Eastern Currency
- Tetradrachm (Antioch).
- Didrachm (Cappadocian mint).

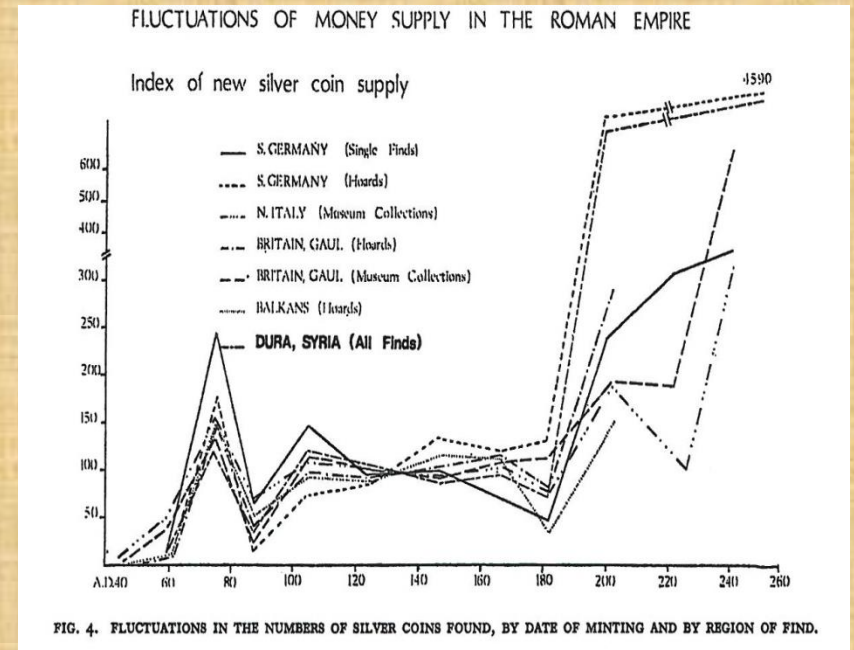


Money Supply

- Increasing number of coins minted with the growth of Roman Empire.
- Production of money not necessarily consistent, emergency needs, commemoration of events – e.g. limited output in Nero's reign prior to AD 60.



Denarii in circulation – 157-30 BC.



Denarii finds in the provinces.

The Circulation of Money

- ▣ Hopkins (1980) – Taxes and Trade theory.
 - provincial towns produce goods to acquire cash to pay taxes,
 - taxes paid to Roman army - purchase goods locally – though level of impact is questionable.
- ▣ Millar (2004) - Practicality and desirability to transport large numbers of coins to Rome?
- ▣ Need to produce more coinage as coins become more worn through circulation.

Debasement and Weight

- ▣ Debasement – a reduction in the precious metal content of a coin, i.e. adulteration with base metals.
- ▣ *Denarius* (Roman silver coin) increasingly subject of debasement during Imperial period – also reduction in weight.
- ▣ Some reduction in weight of *aureus* (Roman gold coin).
- ▣ Ratio of 1 *aureus* to 25 *denarii*.
- ▣ During third century BC more dramatic debasement – by AD 270 *Antoninianus* (double *denarius*) about 2% silver.
- ▣ Causes – limited availability of precious metals?
Increased expenses? Deliberate policy?

Inflation and Prices

$$\text{Price}^{(P)} = \frac{\text{Money Supply}^{(M)} \times \text{Speed of Circulation}^{(V)}}{\text{Quantity of Goods (Q)}}$$

- ▣ Relatively stable prices during first and second centuries AD.
- ▣ Increasing inflation during third century AD – more coins required to purchase goods.
- ▣ Impact on tax collection for Roman government – increase in use of taxes in kind?

Consumption and Living Standards

Surplus Income and Sumptuary Legislation

- ▣ Means of determining prosperity of those lower down the social scale – meat consumption?
- ▣ Wealth massively concentrated into the hands of a very small elite, e.g. Seneca the Younger, Narcissus.
- ▣ Sumptuary legislation - a means of restricting the display of wealth – primarily directed at the elite.
- ▣ Attempts to hinder ruinous competition? – attempt to reinforce legislation in AD 22, arguments made against criminalising displays of status - **Tacitus** *Annals* 3.52.

Roman Wheat Prices

- ▣ Higher prices in Rome? – size and concentration of population – major supply system set up to serve Rome.
- ▣ Price averages for Rome – HS (sesterces) 6 to 12 per modius (6.8 kg) of wheat.

“When a dire famine broke out in Rome [439 BC]... Spurius Maelius... Having many friends and clients, he dispatched them in various directions, giving them money from his own funds to collect food... he distributed it among the citizens, measuring out a peck for two denarii instead of for twelve denarii...” – Dionysius of Halicarnassus 12.1. – equivalent of HS 48 per modius.

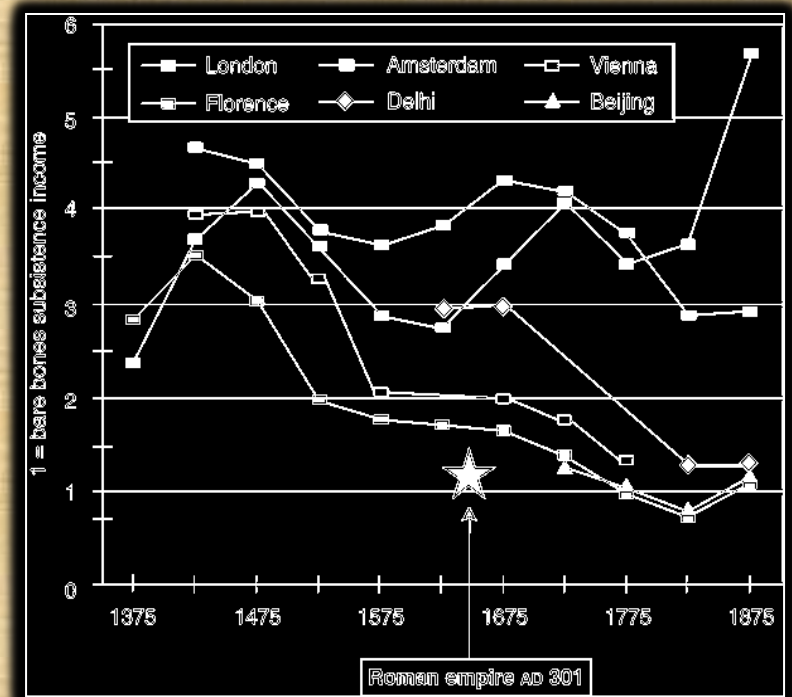
- ▣ 4 asses = 1 sesterce - 4 = 1 denarius – 25 = 1 aureus.

Earning Power

- ▣ Urban cohorts in Rome on 1.5 x pay and praetorians on 3 x pay of ordinary soldier (HS 900 per AD 84) – but higher costs in capital probably reduce this advantage.
- ▣ Casual labourer in Rome – HS 3 per day (Cicero *pro Rosc. Com.* 28) - can buy (at HS 6) 1,240 kg wheat per year (assumes working 365 days).
- ▣ HS 480 per year was perhaps lower end of subsistence for an adult male (HS 6 per modius = 544 kg of wheat per year).

Comparative Living Standards

- Medieval and early modern data compared with Diocletian's price edict (in silver equivalents).
- Respectability basket (food, including meat, wine, clothing and fuel).
- Average daily wage for unskilled labourer (AD 301) – 1.16 g × 250 days of work = 290 g of silver.
- Requirement for respectability basket - 163.921 grams silver × 1.05 for rent × 3 (family) = 516.352 g.
- Worker earned 56% of the cost of the basket (289/516.352).



- Bare-bones basket – curtail non-essential items.
- Cost of bare-bones diet - 83.163 g of silver, for family 261.963 g.

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