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ITALO VECCHI

THE COINAGE OF THE *RASNA*
A STUDY IN ETRUSCAN NUMISMATICS

Part I

HISTORICAL INTRODUCTION

Mystery has surrounded the Etruscans for centuries. They were described either as indigenous Italians or Slavs, Basques, Celts, Canaanites, Armenians, Egyptians or Tatars. Today the most generally accepted theory is that they were a race of indigenous Italic origin infused with oriental influences. The Greek name for the Etruscans is *Tyrsenoi* or *Tyrrhenoi*, the Latin *Etrusci* or *Tusci*, but according to Dionysius of Halicarnassus their own name for themselves was *Rasenna*¹. He quotes Hellanicus' identification of the Etruscans with the Pelasgians, the original inhabitants of Greece who came to Italy and founded Cortona, but, rejecting this legend, states that the Etruscan race «is very ancient and has no similarities in language and customs with any other race²».

Etruria proper, lying between the Arno and the Tiber rivers, takes in part of modern Umbria, all of Tuscany and Latium down to Rome. Etruscan colonies were established in the Po valley and Campania as early as the 6th century B.C.

Etruscan civilization seems to have developed from the Iron Age culture known as Villanovan from the site near Bologna where it was first identified in 1853³. These Iron Age sites later became important Etruscan cities and were usually situated near the sea or on lakes or rivers, and often in naturally defensive positions such as hill-tops surrounded by rich farmland.

The 8th century saw increasing economic development with Phoenician and Greek merchants and colonists trading for Etruscan commodities such as iron, bronze and wood. Though condemned as pirates by a hostile Greek tradition, by the 7th century the Etruscans were naval rivals of the Greeks and Carthaginians. Their influence spread abroad and Etruscan bucchero ware has been found in North Africa, Spain, Southern France and Greece.

An ostentatiously luxury-loving aristocracy evolved, encouraged in its tastes by goods imported from Greece, Phoenicia, Cyprus and Egypt. Fantastic animals and demons, copied from eastern prototypes, were especially appreciated and are prominent in Etruscan art.

¹ Roman Antiquities I 30 Πασέναι, Πασένναι; see also Thesaurus Linguae Etruscae (Rome 1978), 301, *rasna* and TLE Pars I, Liber Linteus Zagrabriensis XI (v), 5.

² Ibid. I. 30, 2.

³ H. Hencken, Tarquinia, Villanovans and early Etruscans, American Society of Prehistoric Research, 1968.

By the 6th century southern Etruria had an advanced culture attested by the tomb paintings, sculptures and monumental architecture found at Vulci, Tarquinia, Cervetri, Veii and Praeneste. The orientalising style was more slowly absorbed in northern Etruria and the Po valley. Apparently the mining areas of Populonia and Vetulonia were not yet developed.

By about 700 B.C. the Etruscans had adopted the archaic Greek alphabet, using the scripts of Pithecousae and Cumae as a model. They developed it locally (subject to dialect and individual solutions to the problems of adaption), mostly for votive inscriptions and for the religious literature which was to influence later Roman ritual practice profoundly. The Etruscan alphabet gave rise to the Oscan and Umbrian scripts in central Italy, and to various alphabets in northern Italy, as well as to the early Latin script used on the *Lapis Nigra* of ca. 600 B.C.

During this period appears in Etruria and Latium the use of *praenomen* and *nomen* followed by *cognomen* as a means of distinguishing *familiae* and *gentes*, a system of nomenclature unique in the ancient world⁴.

Parallel with the Greek world, an artistic golden age blossomed in Etruria where we find migrant Greek painters such as Aristonothos at Caere and western Asiatic metal-workers whose tradition combined Cypro-Phoenician and Greek elements. Vulci housed a school of Greek craftsmen who produced vases of Corinthian type. Scullard well describes how the historical events of the early period down to the 5th century (often handed down to later ages by oral tradition rather than documented evidence, unfortunately), bound the social and economic relations of Etruria with Rome ever closer⁵. In ca. 616 Lucius Tarquinius Priscus of Tarquinia became the first Etruscan king of Rome, establishing a dynasty that was to last until the end of the 6th century B.C. He secured both the Tiber bridgehead and the land route to Campania. Even with a developed agricultural base, industry, advanced mining technology, irrigation, timber and animal husbandry, and despite the spectacular economic and cultural growth of the 6th century caused by the influx of Ionian refugees from the Persian Wars, a system of local coinage was not introduced as it was in the Achaean colonies of southern Italy. This is a controversial statement which I hope to clarify later. In Rome, central Italy and Etruria, however, use was made of bronze bars and crude bronze lumps, *aes rude*, as bullion for limited commercial transactions.

The extent to which Roman institutions and culture are indebted to Etruria is best evaluated by Ogilvie in a constructively critical and scholarly account of Rome's early history⁶. He sifts through the facts and fables in the histories of Livy, Dionysius of Halicarnassus, Diodorus and Cicero and tries to establish what really took place from the start of the Etruscan domination in ca. 625 to the sack of Rome by the Gauls in ca. 390. From this study it emerges that Rome inherited anthropomorphic representations of the gods from the Etruscans as in Tarquin's temple where the Capitoline triad of Jupiter Optimus Maximus (Tinia), Juno (Uni), and Minerva (Minvra) were represented by statues sculptured by Vulca from Veii. This temple probably replaced altars

⁴ E.g. *vel tutna tumu* (Vel, of the family of Tutna, surnamed Tumu), see M. Cristofani, Dizionario della civiltà Etrusca (Florence 1985), 232.

⁵ H. H. Scullard, The Etruscan Cities and Rome (London 1966), 243-284.

⁶ R. M. Ogilvie, Early Rome and the Etruscans (Glasgow 1976).

in an open sanctuary dedicated to Italic deities such as Mars and Quirinus. In common with other cities, Etruscan Rome acquired a Trojan hero-founder in Aeneas.

Although the traditional histories handed down to us are full of anachronisms and are written in a cyclical form similar to the Greek epic where facts and fiction are fitted into a preconceived framework, there is a hard core of fact⁷. Rome became a civilised Etruscan city with a lunisolar calendar, the *toga* and *trabea*, the *sellā curulis*, the ceremony of the triumph and a modern «hoplite» infantry with Greek tactics, recruited by a «levy» *legio* based on individual wealth. Etruscan doctors, priests, craftsmen, builders and traders all helped in this transformation from village to city.

Chaos followed the fall of the Tarquin dynasty to which the insurrections of Mastarna and Porsenna bear witness. Etruria was now to lose contact with Campania via Latium; the salt route (the via Salaria) probably was also interrupted. The general insecurity in central Italy led to a spate of wall building as in Veii and Rome. According to Livy (2.9.6.) the monopoly of salt, the price of which was high, was taken from private individuals and transferred to state control, an indication of troubled economic times. Archaeological evidence for the period 475–450 B.C. shows a reduction in trading relations throughout the region, a recession that was to deepen in the 4th century when the Italic hill tribes encroached on the territory of Latium and the Campania. It is during this period that Etruria began, paradoxically, to become progressively Romanized.

One consequence of these economic setbacks was that many individuals were compelled into bondship, *nexus*; as Ogilvie observed, «in a world without money, there were few ways of discharging debt once it had been incurred⁸.» There was in fact «money» in circulation, in the form of *aes rude* and *aes signatum* of the «ramo secco» type. By the end of the 4th century Rome began to issue a true silver and bronze coinage of Greek type which was soon followed by a reformed system of cast units and divisions, the *aes grave*. Etruria probably followed Rome's initiative in the early 3rd century. Good relations between Rome and Etruria endured; as late as 310 Livy (9.36.36) records that the half brother of the consul Q. Fabius Rullianus was educated at Caere and spoke fluent Etruscan. An important feature of Etruscan society, and lasting until the end of the Roman period, was that no priestly rank could be held by anyone not of aristocratic birth. In Etruria as in Rome, the spiritual power was with the *Rex Sacrorum*, the chief priest.

This aristocratic priestly caste with kings, *lauchme*, and magistrates, *zilath*, supported by a middle class (possibly free farmers) apparently ruled the Etruscan cities before the 3rd century. There seems to have been no need for coined silver and gold, but as we know from Roman sources, the use of bronze was sanctioned as an economic commodity. In his study and analysis, Peruzzi describes the traditional inception of the monetary function of bronze at Rome during the reign of Numa Pompilius, the role of bronze in the Servian census and the system of fines until ca. 434⁹. A means of

⁷ See the fine analysis by M. H. Crawford, *Coinage and Money under the Roman Republic* (London 1985), 17–24.

⁸ *Supra* (n. 6), 108.

⁹ E. Peruzzi, *Money in Early Rome* (Florence 1985).

exchange, as distinct from coinage, had indeed existed in Etruria and central Italy in the form of bronze from early times and lasted until, if not later, than the introduction of coined money in the area at the end of the 4th century.

Etruria had never developed a central political organisation and when faced with the growing power of Rome failed to achieve unity. The league of twelve cities was mainly of a religious character, with a common sanctuary at Volsinii and an annual fair and festival where the representatives of its members would meet.

The decline of the Etruscans is well documented. They were defeated in 524 by Aristodemus of Cumae and again in 505 at Aricia. Tarquinius Superbus, last king of Rome, an Etruscan, was expelled in ca. 510. The Etruscans lost the naval battle of Cumae in 474; moreover, the 5th century saw the loss of Campania to Samnite tribes which deprived the Etruscans of all their southern territories. In the latter part of the 5th century the Gauls invaded the Po valley and in the mid 4th century were threatening Etruria itself. Yet Rome was to prove even more dangerous in the long run and in 396 took Veii after a long siege. Bologna (Felsina) and Marzobotto had fallen into Gaulish hands, and the Senonian chief Brennus entered Etruria and attacked Clusium. Roman envoys responded to the call for help from Clusium which, like Caere, had abstained from assisting Veii; the fact that they fought personally in the battle caused the Gauls to march on Rome itself in 390. Caere gave shelter to the Roman priests and vestal virgins when they fled with their sacred objects before the invaders. According to Livy, Rome bought off the Gauls with 1000 pounds of gold, and then continued its hostilities in Faliscan territory and against Tarquinia¹⁰. Between 358–351, however, all the Etruscan cities united in resistance to Rome. In 353 Caere signed a hundred year's truce while Falerii and Tarquinia obtained one of forty years.

In 311 war broke out again when an alliance of the Etruscan cities (not including Arretium) besieged Roman Sutrium, which had become a Latin colony ca. 383. Rome succeeded in expanding along the upper Tiber valley. The coastal cities were less subject to Roman pressure and were able to send ships to Agathocles of Syracuse when he was blockaded by the Carthaginians in 307 B.C.¹¹

In the early 3rd century some Etruscan cities allied themselves with the Samnites, Umbrians and Gallic tribes against Rome, but this coalition was decisively beaten at Sentinum in Umbria in 295. In 294 Rusellae in central Etruria fell to Rome. In 285 the Gaulish Boii and the Etruscans were defeated at the battle of Lake Vadimo. Further Roman triumphs are recorded for 281/280 against Tarquinia, Volsinii and Vulci, while Caere fell in 273. After this Rome employed a policy of garrisoning southern Etruria and building military roads: the Via Aurelia to the Tyrrhenian coast, the Via Clodia to Saturnia, the Via Cassia to Arretium and the Via Flaminia to Umbria.

Social tensions during the wars had caused internal struggles, as at Volsinii in 264 which can possibly be associated with an issue of rare coins (if so, probably the first to show a mark of value, nos. 1–4). From the sack of Volsinii the Romans carried off two thousand statues, an indication of Etruscan wealth in the early hellenistic period. In

¹⁰ The Early History of Rome, 5.48.

¹¹ Diodorus Siculus xx.61.6–8.

241 Falerii revolted; it was also destroyed and its inhabitants were deported to a new city.

The last great Celtic incursions into Etruria was made by forces composed of tribes from Cisalpine Gaul and mercenaries from Transalpine Gaul. They were annihilated by two Roman armies in 225 near Telamon. The Etruscans made no move to ally themselves with the Gauls as they had done in the early 3rd century.

During the Second Punic War (218-202) the Etruscan cities generally kept their treaties of alliance with Rome although in 202 some of their leading citizens were investigated by the consul Servilius Geminus for conspiracy. In 205 Etruscan allies helped to supply Scipio's expedition against Carthage: Caere provided grain and provisions for the crew, Populonia iron, Tarquinia linen for sails, Volterra corn and wood for shipbuilding, Arretium a vast quantity of armour, weapons, tools, handmills and corn, Clusium and Rusellae timber and wheat. All this suggests considerable agricultural and industrial wealth.

The great aristocratic families appear to have retained their rank and wealth during Rome's gradual incorporation of Etruria into the Roman state and the examples of Arretium and Volsinii show that Rome was always ready to support the ruling classes against the plebians. In 196 a general slave uprising in Etruria was repressed by a Roman army under the praetor M. Acilius Glabrio, who returned the surviving slaves to their owners.

In 137 the quaestor Tiberius Gracchus observed that southern Etruria had been almost abandoned by a free peasantry of smallholders and shepherds and was now dominated by a few rich landlords whose latifundia were worked by foreign slaves. In northern Etruria small farms apparently continued to flourish.

In 91 there was unrest in central Italy owing to the economic consequences of the agrarian laws of Livius Drusus. By 89, however, Rome conferred citizenship on those Etruscans who had remained loyal during the Social War of 91-89. In the subsequent conflict between Marius and Sulla most Etruscan cities favoured Marius, much to their cost. Populonia and Volterrae were besieged and starved out in 82-80.

In 41-40 Octavian besieged Marcus Antonius' brother Lucius in Perusia. This last Etruscan city to make a stand against Rome was starved into submission and burnt to the ground; many of its leading citizens were slaughtered.

The Etruscan nation as such had ceased to exist and in 27 B.C. Etruria became the 7th region of Augustus' Italy. By the time of Varro and the Emperor Claudius the Etruscans were already a matter for antiquarian speculation.

Most of the obscurities of Etruscan history can be traced to a lack of native historians and to a largely hostile Roman tradition. Yet the Etruscans were the first civilized nation which the early Romans encountered. Religion, civil institutions, warfare, architecture, art, engineering, a taste for gladiatorial games, the alphabet and a shared use of bronze currency and monetary institutions demonstrate how Rome was civilized under Etruscan influence.

At some time in the 3rd century Etruria produced a coinage based on a scruple weight standard. In ca. 215 it was modified to conform to the Attic weight standard which prevailed in the hellenistic world, concurrent with the Roman silver denarius introduced in ca. 211.

The monetary tradition

The origins of Etruria's coinage can be sought in the central Italian bronze currency system of the 1st millennium B.C., for which we have literary evidence from Roman sources and oral traditions only. They are anachronistic, however, and tend to invent historical as well as monetary events.

It has long been evident that Rome's early political and cultural development is more closely linked to that of its northern neighbour Etruria than to the Greek colonies of southern Italy where a silver coinage had been introduced in the mid 6th century B.C. based on a weight standard of about 8 g. This coin, Aristotle says, was called a *nomos* at Taras. This weight standard which is found nowhere else seems to have had no influence on the bronze weight standard of central Italy.

The evidence of primitive bronze (*aes rude*) currency hoards in the Po valley, Etruria, Umbria, Campania and Sicily confirms the use of bronze currency, as distinct from coinage, at a very early date. Roman tradition made the beginning of coinage respectably antique by associating it with king Numa Pompilius.

Pliny (N.H. 33, 34), quoting Timaeus, says that Servius Tullius (later identified with the Etruscan Mastarna) was the first king to adopt marked bronze in Rome. This statement probably reflects the designation of a bronze unit of weight in some form in the middle of the 6th century so that commodities, not only bronze, could be calculated in their bronze value by weight in *asses*. Fibulas, adzes, *aes rude* and *aes signatum* of the «ramo secco» type were hoarded and must have been the bronze which needed re-weighing with each transaction, a process that was still in use after the introduction of *aes grave* at the beginning of the 3rd century B.C.

The central Italic *libra* or *pondus* was known as an *as*, «pound», and was weighed, i.e. *pensum*, and not counted, *numeratum* by weighers or cashiers, *dispensatores*. Soldiers' pay, *sipendium*, was heaped and weighed; payments, *expensa*, were weighed out. The etymology of *as* is probably the Greek word *ἀσις* «weighed» or «what draws down». The early *aes rude*, «coarse unfinished lumps of bronze», were weighed out in *aestimatio*, «appraisal» or «estimate». All these terms lasted well into imperial times (by which time their origins had been forgotten) and many have passed into modern languages with little change in their meaning.

Peruzzi has demonstrated that the Latin linguistic tradition produces a clearer understanding of the function of bronze currency¹². Legal acquisitions were confirmed by the formula *per aes et libram*, «by bronze and scales» in a transaction called *mancupium*, «laying one's hand on something acquired» as early as the period of the XII Tables (451–450 B.C.). *Libra*, from the Greek *litra*, is also attested by the XII Tables and may have come from southern Italy.

That Etruria must have had a similar economic system is evident from the bronze hoards in its territory and from the extraordinary occasion recorded by Dionysius of Halicarnassus which is traditionally dated to 508 B.C. Lars Porsenna, the Etruscan king of Clusium, narrowly escaped assassination by Mucius Scaevola while he oversaw the payment of stipendium to the Etruscan army which was besieging Rome in an

¹² Supra (n. 9), 13–77.

attempt to reinstate the Etruscan Tarquinius Superbus, Rome's last king, who had been expelled in 510 B.C.

We have terms from this early period which relate to later coin-striking activities. *Nummus* perhaps derives from Numa Pompilius, owing to the tradition that this king started currency in bronze, and came to mean a coin; it has no connection with the Greek *nomos* meaning custom or law, thus *nomisma* = current coin. The word *moneta*, «coin», derives from the temple of *Juno Moneta* (from the root *monere*, to admonish or remind) dedicated in 344, which was built on the site of the older shrine where the sacred geese of Juno had been kept. This became the location *ad Monetam*, «the mint», during the war against Pyrrhus (281–272). *Salarium* was the money given for salt, hence allowance or pay; the *aerarium*, «place of bronze», was the public treasury.

Between 295 and 293, Livy (X, 30.3) informs us, 1740 Perusian prisoners were ransomed for 310 *asses* each. Perusia and Arretium (X, 37.4) were fined 5,000 *asses* each, and the Faliscan settlement cost 100,000 *asses* of heavy bronze (X, 46.5). It was in the context of the bronze-using economy of central Italy that Etruscan coins appeared in the early 3rd century on a weight standard and with marks of value compatible with the contemporary Roman system. Today Roman issues are well understood but they have a long history of misinterpretation owing to Pliny's mistaken dating of the introduction of the denarius to the 485th year of Rome (269 B.C.), with all the misleading implications this has had for the chronology of the early cast coinage of the region.

The curious delay in the appearance of coinage at Rome has been ascribed by Ogilvie to «the economic collapse that followed on the sack of Rome by the Gauls and the slow recovery thereafter¹³». Etruria was never to become seriously involved with the production of coined money in the way of its Greek and Latin neighbours.

Etruscheria¹⁴, attribution and dating

Etruscan coins were first described by Passeri as early as 1767¹⁵. From the onset they were misunderstood, misdescribed, misattributed and incorrectly dated. Eckhel properly identified coins of Populonia and Volterra but added to the general confusion by attributing the Koson gold stater to Cosa and the coinage of Elis (with F-A in the field) to Falisci¹⁶. Millingen identified Etruria's *aes grave* issues as parallel to those of Umbria and Rome but saw Populonia's early struck issues as archaic on grounds of style and types, and believed them to be influenced by coins from Phocaea in Ionia¹⁷. Carelli correctly catalogued Populonia but attributed the bronze coinage of Vetulonia to Telamon¹⁸. In his monumental work Mommsen gave a metrological analysis of the

¹³ Supra (n. 6), 135.

¹⁴ A term still in use, see *Enciclopedia dell'arte antica* (Rome 1960), 504 and Cristofani (supra n. 4), 99–100.

¹⁵ G. B. Passeri, *In Thomae Dempsteri libros de Etruria regali paralipomena* (Lucca 1767), 153 ff. (*de re nummaria Etruscorum dissertatis*).

¹⁶ J. Eckhel, *Doctrina nummorum veterum* (Vienna 1792).

¹⁷ J. Millingen, *Considérations sur la numismatique de l'ancienne Italie* (Florence 1841).

¹⁸ F. Carelli, *Nummorum Italiae veteris* (Leipzig 1851).

subject but dated Populonia's inception of coinage to the mid 6th century following the example of Solon at Athens¹⁹. Gamurrini wrote an excellent study of the material available; he followed Mommsen's dating but noted the parallels between Populonian and Syracusan litrae for silver and those between the Etruscan and Roman marks of value for gold and bronze issues²⁰. He was the first to publish the hoard of Auriol-type coins from Volterra (IGCH 1875) and other finds. Corssen validly interpreted most of the Etruscan legends in their generally accepted attributions²¹. Müller and Deecke catalogued the various Etruscan issues with traditional dates, adding a list of finds²².

Hultsch identified the scruple standard of the early silver of 11.38 g and followed Mommsen for its Babylonian origin, dating it to the 5th century B.C.²³ A parallel was made between Pliny's denarius of 269 B.C. and the Attic standard 20 litrae silver stater which he called a double denarius. Garrucci was the first to give systematic descriptions of Etruscan coins with find spots and hoard information²⁴. His chronology followed Mommsen's and Hultsch's but the Roman parallels were not taken up. Falchi provided a good catalogue of the Vetulonian coinage but misattributed some of Populonia's silver; he adopted Mommsen's chronology and his parallels with Rome²⁵.

Sambon's work was more complete than Garrucci's and attempted both to include all known types and mints and to discuss the beginning of Etruscan coinage from the mid 5th century on the basis of style and its standard, which he considered Persic²⁶. To this day it is the basic study. Haeberlin compared the Roman gold coins with the *XXX* value mark, now known to be false, with the genuine Volsinii issues²⁷. He later published an excellent study of central Italian bronze metrology, including Etruria, though using traditional dating²⁸. Head fixed the beginning of the gold coinage to the 5th century and the gold issue of Volsinii to ca. 300–265²⁹. According to him, an early Euboeo-Syracusan litra standard before 350 B.C. was followed first by a $\frac{1}{2}$ -litra standard, then in the 3rd century by a 2-scruple standard and finally later by a 1-scruple standard and its bronze equivalents, a very tidy arrangement. In the same year Kovacs also neatly divided the coinage on metrological grounds into six periods from 500 to 200 B.C., relying heavily on Mommsen, Hultsch and Sambon, and drawing on Asiatic origins for the weight standard³⁰. Cesano arranged and dated the series by historical probabilities to the wars against the Gauls and the Romans from the 5th to the 3rd century³¹. In the same year Sydenham noted that it would have been most natural for the Etruscans to have imitated Rome; he went on to date Etruscan silver to

¹⁹ T. Mommsen, *Die Geschichte des römischen Münzwesens* (Berlin 1860), 260–272.

²⁰ C. F. Gamurrini, *Le monete d'oro etrusche*, Per. Num. Sfrag. II (Florence 1874).

²¹ W. Corssen, *Die etruskischen Münzaufschriften*, ZfN 3, 1876, 1–26.

²² K. O. Müller – W. Deecke, *Die Etrusker* (Leipzig 1877), 379–434.

²³ F. Hultsch, *Griechische und römische Metrologie* (Berlin 1882), 684–689.

²⁴ R. Garrucci, *Le monete dell'Italia antica* (Rome 1885).

²⁵ I. Falchi, *Vetulonia e la sua necropoli antichissima* (Florence 1891).

²⁶ A. Sambon, *Les monnaies antiques de l'Italie* (Paris 1903), 7–83.

²⁷ E. J. Haeberlin, *Die jüngste etruskische und die älteste römische Goldprägung*, ZfN 26, 1908, 229–272.

²⁸ id., *Aes Grave* (Frankfurt 1910).

²⁹ HN, 11–16.

³⁰ E. Kovacs, *Le système monétaire de l'Etrurie*, RIN 24, 1911, 382–403.

³¹ S. Cesano, *Tipi monetali etruschi* (Rome 1926).

before 271 and *aes grave* to between 275 and 268³². Giesecke attributed the early silver coinage of scruple standard to the 5th century in southern Etruria³³. He dated the lion-head gold issues to after 450, linking them to the Syracusan litra standard, and gave the Populonian 10-litra Attic weight staters to the 4th century and the 20-litra Attic weight staters to the 3rd century under Roman influence, thus chiefly following traditional theories.

Mattingly noted that the Populonia 20-unit stater was struck on the standard of the denarius³⁴. His second edition, after the «revolution» in which the date of the denarius was lowered, omitted the reference to Populonia³⁵. He later assigned the light Etruscan silver to the Second Punic War (218–201), considerably earlier than his date for the introduction of the denarius which he calculated to be in 187³⁶.

Pallotino published all known Etruscan inscriptions including those on coins and dated them to the 4th and early 3rd century on grounds of style (see TLE nos. 357, 378, 409, 459 and 789)³⁷. Thomsen, in his fundamental study, for the first time placed Etruscan coins in their logical chronological context, parallel to the coinage of Rome, and placed the introduction of the denarius to ca. 211 B.C. on the evidence of the Morgantina finds³⁸. The Plinian school was superseded and it became evident that the Etruscan marks of value denote the same bronze *as* equivalents which were later adopted by Rome for its silver 10-*as* coin, the denarius.

Jenkins published two carefully thought-out articles on the subject. He stated that «the dating of Etruscan coins is notoriously difficult ... yet there appears to be no hoard evidence of value for chronology» and indicated that the Populonian *X* and *XX* value didrachm series probably reflected the central Italian bronze devaluations³⁹. The Etruscan bronze he found «tolerably datable ... they suffer a reduction from triental to sextantal», but found it hardly possible that silver and bronze ran parallel as the style was so different. Later he confirmed the early dating of the *X*-value didrachms, but rejecting Breglia's Asiatic weight standard and Giesecke's Chalcidian litra, he opted for a «scruple» and «double-scruple» standard for inland Etruria⁴⁰.

During the 60s and 70s the Plinian school was championed by Panvini Rosati who stressed the traditionalist dating and attributions in several articles⁴¹.

³² A. E. Sydenham, *A Study of the Cast Coinage of Rome and Central Italy* (Oxford 1926), 700ff.

³³ W. Giesecke, *Italia Numismatica* (Leipzig 1928), 20–30.

³⁴ H. Mattingly, *Roman Coins* (London 1928), 12, n.l.

³⁵ id., 2nd edition (London 1967), 5ff. See also H. Mattingly – E. S. G. Robinson, The date of the Roman denarius and other landmarks in early Roman coinage, *Proceedings of the British Academy* 1932, 211–266.

³⁶ H. Mattingly, The first age of Roman coinage, *JRS* 35, 1945, 65–77.

³⁷ M. Pallotino, *Testimonia Linguae Etruscae* (Florence 1954 and 1968).

³⁸ R. Thomsen, *Early Roman Coins*. Vol. I–III (Copenhagen 1957–1961); see II, 287–305.

³⁹ G. K. Jenkins, *NC* 1955, 132.

⁴⁰ id., *NC* 1959, 23–24.

⁴¹ E.g. F. Panvini Rosati, *La monetazione delle città etrusche e italiche prima della conquista romana* (Bologna 1970).

1975 saw the publication of the «Contributi introduttivi allo studio della monetazione etrusca» with numerous articles by eminent scholars in the field⁴². The traditional school was prominent, but much useful work was done in specific areas which I shall note later. Perhaps the most interesting article was by Sutton; it was not well received by traditionalists as it upheld Thomsen's theory of the parallel between the introduction of the denarius and the 20-as gorgoneion issue of Populonia⁴³. Marchetti took Thomsen's theory to its logical conclusion by demonstrating the metrological linkage between Etruria's four main coinages with marks of value and Roman *aes grave*⁴⁴. The Etruscan issues were shown to be parallel to the Roman libral through to sextantal revaluations which had been identified by many earlier scholars and confirmed by Crawford⁴⁵.

Marchetti published an all-embracing study of the period in which he repeated the theories already expounded in his Naples Atti paper on Etruscan metrology⁴⁶; he was, however, rebuked by Thomsen for some of his interpretations of the weight standards used during Rome's bronze revaluations⁴⁷. Thomsen goes on to refine and confirm the dating of the various stages of bronze revaluation from libral *aes grave* to uncial *aes* within the 3rd century.

In 1979 Thurlow and Vecchi attempted a summary of the latest developments in the dating and attribution of the *aes grave* of central Italy including Etruria⁴⁸; their chronology was based on Thomsen's original survey and was therefore roughly in line with the modern trend toward a lower dating of Republican bronze, with all its implications for Etruscan metrology.

With Catalli we witness the re-emergence of the traditionalist school; he used the excellent line-drawn plates of Garrucci to illustrate a well-researched catalogue but made no attempt at metrological analysis, repeating the traditional chronology based on style⁴⁹.

The Italian Ministry of Culture declared 1985 the year of «Progetto Etruschi» and a great deal was written on Etruscan coins by well-known scholars such as M. Cristofani and L. Tondo⁵⁰. Mostly based on material from the Museo Archeologico of Florence, catalogues were compiled and dated along traditionalist lines with no concession given to the latest research. The same year also saw the publication of Peruzzi's study of central Italy's pre-coinage bronze currency economy which clearly showed how the Etruscan economy was integrated into that of Rome and central Italy

⁴² Atti del V convegno del Centro Internazionale di Studi Numismatici (Naples 1975), hereafter Naples Atti.

⁴³ R. F. Sutton, The Populonian coinage and the Second Punic War, Naples Atti, 199–211.

⁴⁴ P. Marchetti, Monnaies étrusques avec marques de valeur, Naples Atti, 273–310.

⁴⁵ M. H. Crawford, Roman Republic Coinage (Cambridge 1974), 3–35.

⁴⁶ P. Marchetti, Histoire économique et monétaire de la deuxième guerre punique (Brussels 1975).

⁴⁷ R. Thomsen, Les dévaluations à Rome (Rome 1978), 9–30.

⁴⁸ B. K. Thurlow – I. G. Vecchi, Italian Cast Coinage (London 1979).

⁴⁹ F. Catalli, Numismatica etrusca ed italica (Rome 1984).

⁵⁰ M. Cristofani, L. Tondo et al., L'Etruria mineraria. Artigianato artistico and civiltà degli Etruschi (Florence 1985).

from a very early date, but did not take into consideration the anachronistic tendencies of the classical authors⁵¹.

Crawford not only clarified and confirmed the revaluations of bronze from a libral to a sextantal standard in 218–211⁵² but demonstrated the widespread use of pre-currency bronze in central Italy and the parallel between the emergence of the 20-as Populonian silver and the Roman denarius which reflected common efforts and economic conditions in the Second Punic War. Little consideration, however, was given to Etruria's early issues except to state that «for all practical purposes (coinage) was not adopted in Etruria for three centuries after its adoption by the Greek *poleis* in the west».

In 1985 Parise vigorously argued the cause of the traditionalists of the Naples Atti of 1975, linking the coins of Attic weight standard with those of Syracuse in the 5th and 4th century and resuscitating the archaic Asiatic origin for the earlier scruple silver standard⁵³. No attempt was made to refute the chronology for central Italy established by Thomsen and Crawford, although Gardner⁵⁴ was liberally drawn on, and Breglia⁵⁵ and Hackens⁵⁶ were freely cited, all of whom date the introduction of coins in Etruria to between the 6th and 5th centuries.

It is my intention in this brief study to demonstrate how close the relationship was between Etruria and its neighbours in central Italy, most particularly with Rome, its heir and then its master, in numismatic matters as so often and so potently in the affairs of war and the arts of peace.

Metrology

The scruple standard

By the treaty of Apamaea between the Seleucid Empire and the Romans in 188 B.C., the Roman *libra* was for practical purposes tariffed at 80 to the Attic talent of 25,8 kg, giving a *libra* or pound of about 325 g, subdivided into 12 *unciae* of about 27 g and 288 *scripula* of about 1,13 g.

Since the earliest Etruscan silver and gold coinage is based on a scruple standard, the probable date for the unmarked silver of Vulci and Populonia will be that of Rome's earliest silver staters of between ca. 300 and 255. The Roman staters were ultimately stabilised at a weight standard of about six scruples while Etruria kept to units of 20, 10, 5 and 2 scruples, with or without marks of value.

⁵¹ E. Peruzzi, Money in Early Rome (Florence 1985).

⁵² Supra (n. 7), 1–60 *passim*.

⁵³ N. Parise, La prima monetazione etrusca, in: Il commercio etrusco, Concilio Nazionale delle ricerche (Rome 1985), 257–261.

⁵⁴ P. Gardner, A History of Ancient Coinage 700–300 B.C. (Oxford 1918).

⁵⁵ L. Breglia, Le antiche rotte del Mediterraneo documentate da monete e pesi (Rome 1955).

⁵⁶ T. Hackens, La métrologie des monnaies étrusques les plus anciennes, Atti Naples, 221–270.

The marked silver was probably introduced after the inception of *aes grave*, first issued in Rome and Etruria from ca. 280. The issue with the mark of value 5 (nos. 28–35) of about 11,3 g is based on a double scruple silver-related *as* standard corresponding to the so-called libral bronze *as*. The semilibral revaluation of 217 B.C., or soon after, is reflected in the Octopus/Amphora series (nos. 36–38) by 20-*as* pieces of about 22,5 g, 10-*as* pieces of about 11,3 g and unmarked fractions (nos. 39–45) probably intended to correspond to one *as* of the single scruple standard.

Populonia and possibly Vetulonia issued gold multiple-*as* pieces parallel to Rome's Mars/Eagle series struck during the Second Punic War shortly after 211 B.C.; they are on a $\frac{1}{20}$ -scruple gold-*as* standard with multiples of 50, 25 and $12\frac{1}{2}$ *asses*. These issues were also contemporary with Rome's new 10-sextantal *as* denarius (of 4 scruples) and its fractions, all reflected in the Populonian 20-*as* (or didenarius) and a series of fractional silver coins which I shall discuss later.

While the various allegedly libral *aes grave* issues vary in weight, both above and below the theoretical standard Roman pound⁵⁷, the silver scruple standard is more consistent, confirming the weight of the pound at ca. 325 g except in the case of the small fractional silver pieces which seem to have been struck carelessly.

That the Romans and central Italians overestimated the worth of bronze compared with silver and gold is confirmed by Etruscan issues of silver and gold coinage with ever increasing marks of value relative to the bronze *as*.

A remarkable anonymous series, possibly privately issued, with marks of value 1 and 10 reflects a gold *as* standard (theoretically about 0.075 g) related to the bronze so-called triental standard. These *libellae* may well reflect the need for gold coins during the triental 10-*as* Gorgoneion period of between 215 and 211. Crawford attributes the oath-scene gold issues of so-called staters and half-staters on a six-scruple stater standard of about 6.75 g to this period. There also exist other anonymous issues which do not belong to any recognised weight standard but nonetheless bear a mark of value; they come chiefly from central Etruria and are either votive or reflect an era of economic anarchy in the 2nd century B.C. An example of one these *libellae*, which I shall discuss later, can be seen in Garrucci pl. 71,3.

The scruple standard of the libral *as* period, 3 rd century-217

	Denomination	Approximate theoretical weight	Ratio	Bronze <i>as</i> of 288 scruples (theoretical weight 325 g.)=
Volsinii	20- <i>as</i> gold	4 scr. (4.5 g.)	gold/silver 1:10	gold $\frac{1}{2}$ scr. (0.225 g.)
	5- <i>as</i> gold	1 scr. (1.13 g.)		
	1- <i>as</i> silver	2 scr. (2.25 g.)	silver/bronze 1:144	silver 2 scr. (2.25 g.)
Populonia and Vulci	Silver piece	15 scr. (16.9 g.)	-	-
	Silver piece	10 scr. (11.3 g.)	-	-
	Silver Piece	5 scr. (5.6 g.)	-	-
	5- <i>as</i> silver	10 scr. (11.3 g.)	silver/bronze 1:144	silver 2 scr. (2.25 g.)

⁵⁷ There is an excellent deliberation on the weight of the Roman pound in Crawford (supra n. 45), 590–592. See also Thomsen (supra n. 47), 12 ff.

The scruple standard of the semilibral *as* period, ca. 217–215

	Denomination	Approximate theoretical weight	Ratio	Bronze <i>as</i> of 144 scruples (theoretical weight ca. 162 g.) =
Populonia and Vetulonia (?)	20-as silver 10-as silver 5-as silver	20 scr. (22.5 g.) 10 scr. (11.3 g.) 5 scr. (5.6 g.)	silver/bronze 1:144	silver 1 scr. (1.13 g.)

The scruple standard gold and related «denarius» silver of the sextantal *as* period, after 211

	Denomination	Approximate theoretical weight	Ratio	Bronze <i>as</i> of 48 scruples (theoretical weight ca. 54 g.) =
Populonia and Vetulonia (?)	50-as gold 25-as gold 12.5-as gold 10-as gold Silver 20-as (didenarius) 10-as (denarius) 5-as (quinarius) 2.5-as (sestertius) 1-as (libella)	2.5 scr. (2.8 g.) 1.25 scr. (1.4 g.) ½ scr. (0.70 g.) ½ scr. (0.56 g.) 8 scr. (9 g.) 4 scr. (4.5 g.) 2 scr. (2.25 g.) 1 scr. (1.13 g.) ½ scr. (0.45 g.)	gold/silver 1:8 silver /bronze 1:120	gold ½ scr. (0.056 g.) silver ½ scr. (0.45 g.)

The Hoard Evidence

Of the several Etruscan and related hoards in the IGCH only the first three have any relevance to the present study:

The Volterra hoard (IGCH 1875) contained silver coins of the Auriol type; they were published as Etruscan issues by Gamurrini⁵⁸. Cristofani attributed the Pegasus types to a local mint in the 5th century⁵⁹. Furtwängler identified them as Phocaean/Massalian, dating them to the early 5th century as coins of the general Auriol type as found in Spain and Gaul⁶⁰.

The Pyrgi hoard (IGCH 1905) of 1957, published by Colonna, is another example of a foreign group found in Etruria⁶¹. It consisted of 4 tetradrachms of Athens, 3 of Syracuse, and one each of Messana and Leontini and was apparently buried ca. 400 B.C. It is significant that there are no known hoards of Etruscan coins of this period, a sign of absence of monetary activity in Etruria during the 5th and 4th centuries.

⁵⁸ Per. Num. Sfrag. 1872, 208; *ibid.* (*supra* n. 18), 54–57.

⁵⁹ Atti Naples, 87–104, esp. 99–101; (*supra* n. 50), 239–240.

⁶⁰ A. E. Furtwängler, *Monnaies grecques en Gaule*, TYPOS III (Fribourg 1978), 41–44.

⁶¹ A. Colonna, *Ripostiglio del santuario di Pyrgi*, CIN 1961 Vol. II *Atti* (Rome 1965), 167–177.

The Campiglia Marittima hoard (IGCH 1943) found in 1932 consisted of lion's head gold of 50, 25 and 12½ *asses*, two male head types of 10 *asses* and the unique owl type of the same value. Kraay in IGCH doubted that there was any silver in the find (as reported by Ravel in 1936) and queried a 4th century date. The hoard represents part of the Populonian gold issue parallel to Rome's Mars/Eagle gold struck on a gold *as* standard of about 0.056 g (1/20-scruple) and corresponds to the bronze sextantal *as* of about 54 g (48 scruples). This hoard may well have been much larger in number than the recorded pieces; since the 1930s many examples of what was previously a very rare coin have turned up in commerce.

The Populonia hoard (IGCH 1953) of 1867⁶²; the Cecina hoard (IGCH 1954)⁶³ of 1858 (which includes the wheel type, Sambon 26); the Sovana hoard (IGCH 2041)⁶⁴ of 1885; the Val d'Orcia (IGCH 2042)⁶⁵ of 1930; and the large Populonia hoard (IGCH 2043) of 1939 first published by Scamuzzi⁶⁶ and again by Petrillo Serafin⁶⁷ are all of the Roman sextantal period (ca. 211–200 B.C.).

The Gattaiola hoard found by Zecchino in 1985 contained three 10-*as* hippocamp silver types (SNG ANS 17) and five fractional pieces of a previously unknown type, a goose⁶⁸. Based on the weight standard of the 10-*as* pieces, this hoard seems also to be of the sextantal period though it was found with hellenistic pottery of reputably earlier date.

A group of *aes grave* found at Tarquinia and published by Haeberlin is on a heavy bronze *as* standard of up to 367 g and is related to Rome's heavy libral *aes grave* of ca. 280–240⁶⁹. It was probably during this period that Etruscan silver coins with marks of value were first issued on a consistent scruple standard, but apparently in small quantities only, as witnessed by the lack of hoards of Etruscan silver coins of this early period.

Other Etruscan bronze appears in the Monteriggioni hoard (IGCH 2049), dated by Crawford to ca. 180⁷⁰, and the Città Sant' Angelo hoard (IGCH 2051)⁷¹, dated by the same author to ca. 150.

The 3500 silver coins of the Carrara hoard (IGCH 2055), dated ca. 80 by Crawford⁷², were mainly Roman silver victoriati, denarii and quinarii together with 3 triobols of the Achaean League; it contained no Etruscan coins at all.

A few stray finds of Greek coins mainly from Neapolis, but also from Macedonia and southern Italy listed by Crawford⁷³ indicate the sparseness of coin and hoard

⁶² Gamurrini, Per. Num. Sfrag. 1872, 209.

⁶³ id., Per. Num. Sfrag. 1874, 68 n. 1.

⁶⁴ C. F. Gamurrini, *Le monete dell'Italia antica* II (Rome 1885), 184; R. Bianchi Bandinelli, *Studi Etruschi* 1932, 552 note 1.

⁶⁵ Bianchi Bandinelli, 543–553.

⁶⁶ E. Scamuzzi, *Studi Etruschi* 1941, 141–162.

⁶⁷ P. Petrillo Serafin, *AIIN* 23–24, 1977, 69–106.

⁶⁸ Le monete etrusche di Lucca, *RIN* 87, 1985, 273–274, da: *Archeologia Viva* 4, 1985, 3.

⁶⁹ Haeberlin (supra n. 27), pl. 92.

⁷⁰ M. H. Crawford, *Roman Republican Coin Hoards* (London 1969), 555.

⁷¹ Crawford (supra n. 70), 129.

⁷² Crawford (supra n. 70), 260.

⁷³ Crawford (supra n. 52), 3–5 and App. 1.

evidence in Etruria though the area has been intensively searched for centuries by archaeologists and *tombaroli*. The find of a 10-*as* gorgon type stater in the Prestino, via Isonzo excavation, presents problems of chronology⁷⁴. The stratum in which the coin was found has been attributed to 5th century B.C. and this led to a very early date for this type in the archaeological report.

The Castelfranco Emilia «ramo secco» bar hoard was published along with a list of other associated bars and *aes rude* from the Po valley to Sicily, gives us a picture of their extensive circulation, especially in Etruria⁷⁵.

⁷⁴ R. de Marinis, Prestino, via Isonzo, in: *Como fra Etruschi e Celti*, Società Archeologica Comense (Como 1986), 113-120.

⁷⁵ F. Panvini Rosati, *Il ripostiglio di Castelfranco Emilia, nuovi elementi*, in: *Emilia Preromana* (Modena 1971), 15-26.

CATALOGUE

Cesano	see note 30
Gamurrini	see note 19
Garrucci	see note 23
Sambon	see note 25
Venturi Ginori	auction Santamaria 1937 (coll. Venturi Ginori)

VULCI (Velch-)

Thezli series, 3rd cent.-217
Silver

10 scruples

1 O 1 Gorgon running l., holding a serpent in each hand. Border of dots.


R 1  Archaic cart-wheel with long crossbar supported by two struts.
 Border of dots.

1 9.81 Leiden (inv. 16)
 2* 10.99 New York, ANS, SNG 12
 3 9.25 Rome, Villa Giulia = Garrucci pl. 73, 31 = Cesano 7
 (found at Vulci)

2 O 1 Same die as no. 1
 R 2 Similar to no. 1

1* 11.13 London BMC p. 12, 1 = Garrucci pl. 73, 29 = Sambon 11
 (found at Vulci)

3 O 2 Similar to no. 1
 R 3 Similar to no. 1 but no legend

1* 11.30 Paris, de Luynes 8 = Garrucci pl. 73, 30 = Sambon pl. 1, 12
 (found at Vulci)

4 O 3 Similar to no. 1
 R 4 Similar to no. 3

1 11.62 Gulbenkian 2 (Hess purchase 1953)
 2* 11.50 Private coll. = Exhibition Antikenmuseum Basel 1.

5 O 4 Similar to no. 1
 R 5 Similar to no. 3

1* 11.36 Naples, Museo Nazionale (Fiorelli coll.) = Cesano 6 = Gardner pl. 1, 6

6 O 5 **O E T I E** Head and shoulders of a cow r., nearly facing. Linear border.
 R 5 Sea-monster r. with head of horse, fins and tail of fish.

1* 9.39 London, BMC p. 397, 1 = Garrucci pl. 73, 33 = Sambon 14
 (purchased in Civitavecchia in 1861, it passed from the
 Sambon to the Wigan coll. and finally to the British Museum
 in 1872)

5 scruples

7 O 6 Sphinx seated r. Linear border.
 R 7 **Ὡ** **Ὡ** Young male head l., nearly facing; above and below, serpents.
 Border of dots.
 1* 5.35 Paris, de Luynes 9 = Garrucci pl. 73, 32 = Sambon 13

8 O 6 Same die as no. 7
 R 8 Similar to no. 7
 1* 5.31 Berlin (inv. 956/1904)
 2* 5.25 Florence, Museo Arch. = Cesano 24

9 O 7 Similar to no. 7
 R 9 Similar to no. 7 but no legend
 1* 5.23 Private coll. (found at Vulci)

This series can be attributed to Vulci on find evidence. The weight standard of this issue is based on pieces of about 11.3 g (10 scruples) and halves. Thezle (or Thezli) may be the combination of the Etruscan name Theforie and Zilat, rendered in Latin as *Tiberius praetor*⁷⁶.

An exemple of type 3 (fourré, 11.45 g) was reported by Eckhel (D.n.v.I, 269) as in the Gotha collection and to have been found on Malta.

⁷⁶ Supra (n. 36), 467 and 875. See also G. and L. Bonfante, *Lingua e cultura degli Etruschi* (Rome 1985), 188.

VOLSINII (Velsu, Velsna, Velzna)

Gold, 3rd cent. -217

20 asses

10 O 8 Young male head l., wearing myrtle wreath; on either side of neck, **X**.
R 10 **INANCI** Bull walking 1; above, dove flying l. with wreath in beak; in field 1., star of eight rays.
1* 4.67 London, BMC p. 11, 1 (Pembroke) = Garrucci pl. 71, 13 = Sambon 9

5 asses

11 O 9 Female head r., wearing diadem, earring and necklace; below, **A**. Border of dots.
R 11 **V2437** Dog prancing r.; above, **A**. Border of dots.
1* 1.15 New York, ANS, SNG 11 = Garrucci pl. 125, 14 = Strozzi 539
12 O 10 Similar to no. 11
R 12 Similar to no. 11
1* 1.15 Gotha = Eckhel p. 16 (Bracciano Museum and Queen Christina coll.) = Sestini p. 22 = Millingen (supra n. 15) p. 172 = Garrucci pl. 71, 12 = Sambon pl. 1, 10
2* 1.13 Paris, BN 4

The weight standard is based on a gold *as* of approx. 0.225 g or $1/5$ scruple, possibly issued in 265/4 at the time of the slave rebellion which was put down by Rome on behalf of Volsinii.

1 as

13 O 11 Head of Athena r., wearing Corinthian helmet bound with laurel wreath.
R 13 **A 151 (3)** Lion crouching l., spear in mouth; below, **I**.
1* 2.78 Present location unknown. Haeberlin, ZfN 26, 1908, 231 and pl. 1, 3 = Giesecke (supra n. 31), pl. 21, 10.

As the coin is not available the recorded weight could not be checked. This unique piece probably represents a silver *as* on a two scruple standard of about 2,25 g.

POPULONIA (Pupluna)

15 scruples

14 Obv. Boar advancing r. on rocky ground. Border of dots.
Rev. Plain.
1* 16.35 London, BM = Hess-Leu 1958, 5 = Münzhandlung Basel 4, 1935, 136 = Cesano 4
2 16.12 New York, ANS, SNG 14 = Strozzi 541

15 Obv. and Rev. Similar to no. 14
1* 16.67 Florence, Museo Arch. = Cesano 5

16 Obv. and Rev. Similar to no. 14
1* 16.15 Paris, BN 6 = Sambon 19

17 Obv. and Rev. Similar to no. 14
1 15.75 New York, ANS, SNG 15 = Venturi Ginori 17
2* 15.95 Vatican, Medagliere della Biblioteca = Garrucci pl. 71, 17

18 Obv. Lion crouching l., tail ending in serpent's head. Border of dots.
Rev. Plain.
1* 16.67 London, BMC p. 7, 1 = Garrucci pl. 71, 15 = Sambon pl. 1, 18

19 Obv. and Rev. Similar to no. 18

1* 16.38 Florence, Museo Arch. (Mazzolini coll. 166, found at Populonia) = Garrucci pl. 71, 16 = Cesano 1

2 16.57 Paris, BN 5

20 Obv. and Rev. Similar to no. 18

1* 16.33 Berlin, pl. 1, 8 (Fox coll.)

10 scruples

21 Obv. Lion-monster l. with head and forepaws of lion and coiled fish-like body with a fin, terminating in serpent's head. Border of dots.
Rev. Plain.

1* 10.87 London, BM = Hess-Leu 1956, 2 = Jameson 1849
2 9.97 Rome, Museo Nazionale = Cesano 2

22 Obv. and Rev. Similar to no. 21
1* 10.62 New York, ANS, SNG 13 = Strozzi 540

23 Obv. and Rev. Similar to no. 21
1* 10.62 Gotha = Sambon 15

24 Obv. Similar to no. 21 but type to r.
Rev. Plain.

1* 11.00 Florence, Museo Arch. (Mazzolini coll.) = Sambon 16
(found at Populonia)

5 scruples (?)

25 Obv. Head of lion l. with raised mane and open jaws. Border of dots.
Rev. Plain.

1* 3.66 Glendining, 13 Dec. 1963, 4 = Hess-Leu 1959, 4
2 5.48 Rome, Museo Nazionale

26 Obv. and Rev. Similar to no. 25
1* 3.40 Private coll. = Exhibition Antikenmuseum Basel 2

27 Obv. and Rev. Similar to no. 25

1 3.87 Florence, Museo Arch. (Mazzolini coll.) = Sambon,
17 = Cesano 3 (found at Populonia)
2* 3.85 Florence, Museo Arch. (inv. 5531)

This series like the one of Vulci is based on the scruple standard and is characterised by plain reverses. It is attributable to Populonia on find evidence. Since coinage was not in general circulation in Etruria these issues must have served a specific local purpose.

Silver, Bearded male head series, 3rd cent. -217

5 asses

28 Obv. Bearded and laureate head r.; behind, Δ .

Rev. Plain.

1* 11.37 Paris, BN 30 = RN 1859, pl. 15, 2 = Garrucci pl. 72,
19 = Sambon 99

29 Obv. and Rev. Similar to no. 28

1* 10.54 Berlin 20 (Löbbecke) = Sotheby 1896 (Bunbury), 18 (part)

30 Obv. Similar to no. 28 but head l. Linear border.

Rev. Plain.

1* 11.37 London, BMC 2
2 11.27 Milan, Castello Sforzesco (inv. 7385, overstruck)
3 11.14 Paris, BN 31

31 Obv. Similar to no. 30. Border of dots.

1* 11.24 London, BMC 3 = Sambon 100

The weight standard is based on a silver 5 *as* piece of about 11.3 g (10 scruples) giving a silver *as* of about 2.25 g (2 scruples) equivalent to a libral bronze *as*.

Silver, Young male head series, 3rd cent. -217

5 asses

32 Obv. Young male head r., wearing laurel wreath; behind, Δ . Border of dots.
Rev. Plain.

1* 10.42 London, BMC 4

33 Obv. and Rev. Similar to no. 32

1*	11.25	Auctioes 10, 1979, 43 = Leu 20, 1978, 2
2	10.78	Berlin (inv. 32/1907, Krupp gift)
3	10.83	Florence, Museo Arch. = Strozzi 623
4	11.13	Leu 7, 1973, 12
5	11.13	London, Lloyd, SNG 22
6	11.12	Naville 6, 1924 (Bement), 24 = Egger 40, 1912 (Prowe), 36
7	10.79	Niggeler 1, 1965, 11 = Jameson 20 = Hirsch 21, 1908 (Consul Weber), 175
8	10.84	Numismatic Fine Arts 4, 1977, 5
9	10.81	Sambon 1903 (Maddalena), 45 = Sambon 100
10	11.13	Schweiz. Bankverein Zürich 2, 1977, 3 = Sotheby, May 1974, 276
11*	11.11	Sternberg 15, 1985, 77

34 Obv. and Rev. Similar to no. 32 but with locks of hair next to ear

1	11.10	Glendining, April 1955 (Nobleman), 72
2	11.43	Hess-Leu 49, 1971, 10
3	11.02	New York, ANS, SNG 25
4	11.11	Oxford, Ashmolean, SNG 12
5*	10.75	Private coll. = Exhibition Antikenmuseum Basel 3
6	11.29	Sternberg 20, 1988, 4

35 Obv. Similar to no. 32

Rev. **x** (?) within two circles. Overstruck on 5 *asses* of the bearded male head type, as nos. 28-30

1*	10.81	Milan (inv. 7386) = Garrucci pl. 72, 25 = Sambon 102
2*	11.25	Vatican (also with x in rev. field)

The weight standard is based on a silver *as* of about 2.25 g (2 scruples) which in the case of no. 35 may have been revalued to 10 semilibral *asses* in 217 B.C.

Silver, Octopus/Amphora series, c.217-215

20 *asses*

36 Obv. Octopus emerging from amphora on stand in the shape of an octopus «apron»; below, **•x x•**. Linear border.

Rev. Plain.

1	22.39	Gulbenkian 1 = Jameson 21 = Strozzi 542 (found at Pisa)
2	22.68	London, BM = Sambon 20
3*	21.41	New York, ANS, SNG 16 = Garrucci pl. 71, 18
4	21.95	Private coll. = Exhibition Antikenmuseum Basel 4

10 asses

37 Obv. Octopus emerging from amphora; below, **X**. Linear border.
Rev. Plain.

1	10.14	Hess-Leu 1957, 3 = Jameson 22
2	10.50	London, Lloyd, SNG 19 = Hirsch 33, 1913, 12
3	11.69	MM AG 52, 1975, 2
4*	10.02	Private coll. = Exhibition Antikenmuseum Basel 5
5	9.71	Private coll. = Sotheby, May 1983, 3
6		Sotheby, May 1983, 2
7*	11.50	Volterra, Museo Arch. = Carelli pl. 7, 10 = Sambon 21

5 asses

38 Obv. Amphora; to 1., **A**. Linear border.
Rev. Plain.

1*	4.85	Jameson 23
2*	5.48	Private coll. = Exhibition Antikenmuseum Basel 6

The weight standard is based on a silver *as* of 1 scruple of about 1.13 g, corresponding to a bronze semilibral *as* of theoretically about 162 g.

Silver, Octopus series, c.217–215 (?)

2 scruples (?)

39 Obv. Octopus. Linear border.
Rev. Plain.

1*	1.94	New York, ANS, SNG 19 = Venturi Ginori 11 = Sambon 28
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1 scruple (?)

40 Obv. Octopus. Linear border.
Rev. Plain.

1	0.91	Florence, Museo Arch.
2	0.75	Hess, Lucerne, 1936, 238
3	0.97	Hess-Leu 1957, 11 = Jameson 18
4*	1.03	London, Lloyd, SNG 20
5*	1.10	London, Lloyd, SNG 21 = Ratto 1925,5 (bronze core)
6	1.13	New York, ANS, SNG 20
7	0.71	Ratto 1934, 18

41 Obv. and Rev. Similar to no. 40

1*	0.92	Campana coll.
2	0.77	Tempestini coll.

42 Obv. and Rev. Similar to no. 40

1	1.10	Berlin (inv. 829/1899 9)
2*		Florence, Museo Arch. (inv. 5531)
3*	0.81	London, BM = Strozzi 547
4		Ratto, listino 1933, 181
5	1.04	Venturi Ginori 12

43 Obv. and Rev. Similar to no. 40

1*	1.15	MM AG 52, 1975, 4
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44 Obv. and Rev. Similar to no. 40

1*	0.97	de Nanteuil 29
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45 Obv. Octopus within linear circle. Border of dots.
Rev. Plain.

1*	0.70	Florence, Museo Arch. (Mazzolini coll.) = Sambon 29
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This series may represent the smaller denominations of the octopus/amphora series; the weight standard seems to be the scruple of about 1.13 g, corresponding to a silver *as* equivalent of the semilibral bronze *as*.

Gold, Lion's head series, c. 211-200

50 asses

46 Obv. Head of lion r. with open jaws and protruding tongue; below, \uparrow . Border of dots.
Rev. Plain.

1	2.72	Ars Classica 16, 1933, 4
2	2.79	Ars Classica 17, 1934, 4
3		Florence, Mus. Arch.
4	2.83	Hess-Leu 1954, 19
5	2.80	Hess-Leu 1955, 1 = Jameson 2376 = Strozzi 526 = Garrucci 4 = Sambon 1 = Gamurrini 1
6	2.80	Hess-Leu 1957, 9
7	2.73	Hess-Leu 1958, 3
8	2.83	Hess-Leu 36, 1968, 5

9	2.91	Hess-Leu 45, 1970, 2
10	2.87	Leu 33, 1983, 188 = Hess-Leu 31, 1966, 10
11	2.82	Leu 36, 1985, 11 = Hess-Leu 49, 1971, 7
12	2.78	Leu 45, 1988, 6 = Hess-Leu 28, 1965, 3
13	2.81	London, Lloyd, SNG 9 (Campiglia hoard)
14	2.79	New York, ANS, SNG 1 (Campiglia hoard)
15*	2.80	Private coll. = Exhibition Antikenmuseum Basel 8
16	2.81	Rome, Museo Nazionale

25 asses

47 Obv. and Rev. Similar to no. 46 but behind head .

1	1.56	Ars Classica 16, 1933, 5
2	1.39	Ars Classica 16, 1933, 6
3	1.41	Ars Classica 17, 1934, 8
4	1.38	Berlin (inv. 24/1907)
5	1.60	Canessa-de Nicola, listino 1948, 1
6	1.60	Canessa-de Nicola, listino 1949, 1
7	1.36	Copenhagen, SNG 36
8	1.39	Dewing coll. 72
9	1.43	Florence, Museo Nazionale = Gamurrini 2 (purchased in Lucca in 1867)
10	1.41	Florence, Museo Nazionale
11	1.37	Glendining, April 1955 (Nobleman), 3
12	1.49	Hess 253, 1983, 1
13	1.43	Hess-Leu 1957, 10
14	1.43	Hess-Leu 1959, 2
15	1.40	Hess-Leu 1963, 9
16	1.45	Hess-Leu 28, 1965, 4
17	1.38	Hess-Leu 31, 1966, 11
18	1.45	Hirsch 16, 1958, 26
19	1.38	Jameson 17
20	1.41	Leu 13, 1975, 5
21	1.40	Leu 20, 1978, 1
22	1.61	Leu 36, 1985, 12
23	1.49	Lockett, SNG 42 = Ars Classica 17, 1934, 9
24*	1.39	London, Lloyd, SNG 10 (Campiglia hoard)
25	1.43	Milan (inv. 1706)
26	1.40	MM AG 38, 1968 (Voirol), 3 = Münzhandlung Basel 10, 1938, 12
27	1.59	MM AG 41, 1970, 1
28	1.38	MM AG 44, 1971, 1 = Santamaria, listino 1962, 2
29	1.38	MM AG 54, 1978, 9
30	1.40	New York, ANS, SNG 2 (Campiglia hoard)

31	1.43	Oxford, Evans, SNG 1
32	1.43	Oxford, Ashmolean, SNG 10
33	1.35	Private coll.
34	1.43	Ratto, listino 21, 1939, 65
35	1.40	Santamaria, listino 1966, 183 = 1964, 1
36	1.41	Sotheby, June 1979, 1
37	1.36	Strozzi 527 = Garrucci 5 = Gamurrini 2
38	1.35	Venturi Ginori 5

12½ asses

48 Obv. and Rev. Similar to no. 46 but behind head, $\uparrow \llcorner$.

1	0.71	Hess-Leu 31, 1966, 12
2*	0.69	London, BM
3	0.75	New York, ANS, SNG 3 (Campiglia hoard)
4	0.72	Paris, BN 1
5	0.60	Private coll.
6	0.72	Strozzi 528 = Garrucci 6 = Sambon 3 = Gamurrini 3 (purchased in Pisa in 1872)

Gold, Female head series, c. 211-200

50 asses

49 Obv. Female head r.; behind, \uparrow . Linear border.

Rev. Plain.

1*	2.70	London, Lloyd, SNG 11 (Campiglia hoard)
2	2.83	MM AG 64, 1984, 1

25 asses

50 Obv. Female head r., wearing necklace, hair rolled; behind, $\wedge \times \times$.
Linear border.

Rev. Plain.

1	1.35	Berlin (inv. 25/1907, Krupp gift)
2	1.31	Cambridge, McClean, 122
3	1.30	Florence, Museo Arch. (Mazzolini coll.) = Sambon 5
4	1.36	Gamurrini pl. 3, 5 (Mancini coll., found near Roselle in 1873)

5 1.40 New York, ANS, SNG 7 = Strozzi 530 = Gamurrini 5
(found near Populonia in 1872)

6* 1.38 Private coll.

7 1.32 Strozzi 531 = Gamurrini 5 bis (found near Buonconvento)

51 Obv. Similar to 50 but type 1
1* 1.32 Private coll.

52 Obv. Similar to 50 but before head, < and below, ✕ ✕ .
1* 1.43 MM AG 61, 1982, 3

Gold, Male head series, c. 211-200

25 asses

53 Obv. Youngh male head r. with curly hair and necklace; below, ▲ XX .
Linear border.
Rev. Plain.

1 1.37 Ars Classica 15, 1930, 27
2 1.41 Ars Classica 16, 1933, 7
3 1.35 Ars Classica 17, 1934, 10
4 1.50 Cahn 68, 1930, 880
5 1.41 Cahn 68, 1930, 881
6 1.06 Cahn 68, 1930, 883
7 1.41 Canessa 1923 (Caruso), 1
8 1.36 Canessa-de Nicola, listino 1948, 3
9 Florence, Museo Arch. (inv. 83090) = Sambon 4
10 Florence, Museo Arch.
11 1.41 Glendining, 13 Dec. 1963, 6
12 1.48 Hess-Leu 1957, 12 = Jameson 2378 = Venturi Ginori 7
(Piombino hoard)
13 1.38 Hess-Leu 1958, 4
14 1.37 Hess-Leu 28, 1965, 5
15 1.23 Hess-Leu 45, 1970, 3
16 1.40 Hirsch 34, 1914, 3
17 1.50 Leu 36, 1985, 13
18 1.34 Leu-Numismatic Fine Arts 1984 (Garrett II), 93
19 1.40 Lloyd, SNG 12 (Campiglia hoard)
20 1.36 Lloyd, SNG 15 = Naville 6, 1924 (Bement), 18 (Campiglia
hoard)
21 1.40 Lockett, SNG 43
22 1.39 London, Lloyd, SNG 13 (Campiglia hoard)

23	1.30	London, Lloyd, SNG 14 (Campiglia hoard)
24	1.28	Montenapoleone 8, 1988, 1
25	1.37	MM AG 8, 1949, 692
26	1.39	MM AG 44, 1971, 2
27	1.37	MM AG 54, 1978, 11 = de Nanteuil, 28 = Hirsch 34, 1914, 4
28	1.29	de Nanteuil 27 = Sotheby 1916 (Headlam), 269
29	1.40	New York, ANS, SNG 4 (found near Florence)
30	1.38	New York, ANS, SNG 5
31	1.40	Oxford, Ashmolean, SNG 11
32*	1.46	Private coll.
33	1.34	Roselle Museum (found locally in 1873) = Gamurrini 4
34	1.52	Sotheby, June 1979, 2
35	1.37	Sotheby, June 1979, 3
36	1.26	Sternberg 20, 1988, 5
37	1.25	Venturi Ginori 7
38	1.30	Venturi Ginori 8
54	Obv.	Similar to no. 53
1*	1.42	New York, ANS, SNG 6 = Strozzi 532 (found at Populonia)

10 asses

55	Obv.	Young male head r. with curly hair; below chin, X . Linear border.
	Rev.	Plain.
1	0.57	Berlin (inv. 26/1907, Krupp gift)
2	0.54	Kricheldorf 7, 1959, 16
3*	0.55	London, Lloyd, SNG 16
4	0.52	Sternberg 20, 1988, 4
56	Obv. and Rev.	Similar to no. 55
1*	0.61	Private coll.
57	Obv. and Rev.	Similar to no. 55
1	0.55	Canessa 1923 (Caruso), 3
2	0.50	Sotheby, June 1979, 4
3*	0.57	Sotheby 1983 (Brand III), 3 = Pozzi 37
4	0.58	Strozzi 533
58	Obv. and Rev.	Similar to no. 55
1*	0.52	Hess-Leu 1959, 3

59 Obv. Similar to no. 55 but type to 1.
 Rev. Plain.

1*	0.57	Ars Classica 16, 1933, 8
2	0.58	Lockett, SNG 44
3	0.52	MM AG 19, 1954, 306
4	0.56	Paris, de Luynes 1 = Gamurrini 8 bis
5	0.56	Ratto, listino 1933, 171
6	0.50	Sangiorgi 1907 (Martinetti), 142 (Vetulonia hoard)

60 Obv. and Rev. Similar to no. 59

1	0.58	Canessa 1923 (Caruso), 2
2	0.57	Florence, Museo Arch. (inv. 87140)
3	0.60	Gamurrini 8 (Strozzi coll.)
4	0.56	Hess-Leu 1963, 10
5		Kricheldorf 30, 1976, 25
6	0.57	München, SNG 19
7	0.55	New York, ANS, SNG 8
8*	0.61	Trinci coll.
9	0.56	Venturi Ginori 9

61 Obv. Young male head r. with curly hair; behind neck, **X**. Linear border.
 Rev. Plain.

1	0.61	Jameson 19
2*	0.57	London, BMC p. 6, 29
3	0.61	Private coll.
4	0.57	Strozzi 535

62 Obv. and Rev. Similar to no. 61

1*	0.70	London, Lloyd, SNG 17 (Campiglia hoard)
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63 Obv. and Rev. Similar to no. 61

1*	0.59	Venturi Ginori 10
----	------	-------------------

64 Obv. and Rev. Similar to no. 61

1*	0.61	Ars Classica 17, 1934, 11
2	0.58	New York, ANS, SNG 9 = Naville 5, 1923, 104

65 Obv. and Rev. Similar to no. 61

1*	0.57	Florence, Museo Arch. (inv. 5526, found at Populonia)
2	0.57	Leu 38, 1986, 1

66 Obv. Similar to 61 but with necklace

Rev. Plain.

1* 0.68 Hess-Leu 1960, 25

67 Obv. and Rev. Similar to no. 66

1* Budapest, National Museum

Gold, Owl series, c. 211-200

10 asses

68 Obv. Owl with closed wings, standing 1.; behind **X**. Border of dots.

Rev. Plain.

1* 0.68 London, Lloyd, SNG 18 (Campiglia hoard)

Gold, Gorgoneion series, c. 211-200

50 asses

69 Obv. Gorgoneion, hair bound with diadem; below, **↑**.

Rev. Plain.

1* 2.73 London, BM = Hess-Leu 1962, 12

70 Obv. Similar to no. 69

Rev. Plain.

1* 2.87 Private coll. = Exhibition Antikenmuseum Basel 9

The weight standard is based on a gold *as* of about 0.056 g and is linked to the Mars/Eagle gold issue at Rome (Crawford 44/2-4), itself corresponding to the sextantal bronze *as*.

UNCERTAIN MINT (Vetulonia?)

Silver series, c. 217-215

5 asses

71 Obv. Hippocamp r., surrounded by four dolphins; in field r., <. Linear border.
Rev. Cerberus within linear square.

1* 5.36 London, BM = Garrucci pl. 71, 30 = Sambon 22

The weight standard is based on a silver *as* of one scruple of about 1.13 g, corresponding to a bronze semilibral *as*.

Gold, Hippocamp series, c. 211-200

50 asses

72 Obv. Hippocamp r.; below, Δ (for \uparrow). Border of dots.
Rev. Plain.

1* 2.77 New York, ANS, SNG 10 = Strozzi 529 = Sambon 8

12½ asses

73 Obv. Hippocamp l.; below, $\text{XII}\Delta$. Border of dots.
Rev. Plain.
1* 0.75 Florence, Museo Arch. (inv. 84015) = Milani 1912 (Piccione), 187

The weight standard is similar to that of Populonia for the sextantal *as* period. They were possibly produced at Vetulonia together with this city's large sextantal bronze issues.

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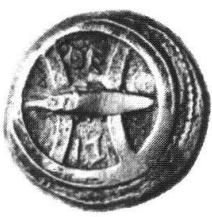
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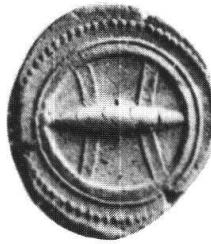
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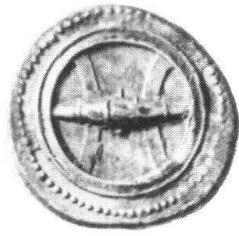
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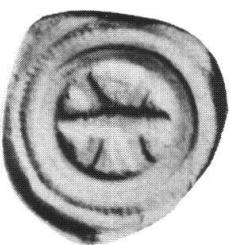
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8/2



9





10



11



12/1



12/2



13



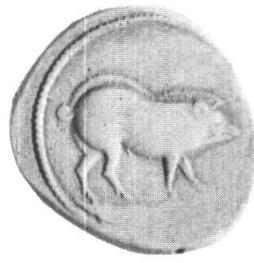
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18



19/1



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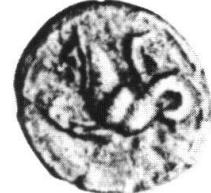
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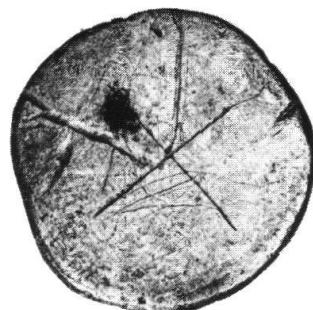


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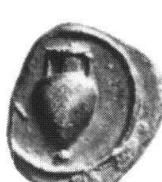
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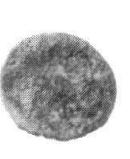
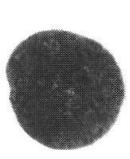
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43



44



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PLATE 9

