

Gods, Goddesses and Flying Horses: A History of Coins in Ancient Greece



Prepared for Freshman Seminar

by

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Forward

The first thing that drew me to ancient Greek coins was the Owl, the silver stater (or main coin) of ancient Athens featured on the front page of this paper. It was Athens' solution to the problem confronting trade everywhere and throughout history: how to pay for goods no matter how far away from home, using a compact medium whose value everyone could recognize and agree upon. American dollars play this role in world markets today. Hoards from the 5th Century BC, unearthed all around the Mediterranean Sea, confirm that Owls were the world's first great international currency.

The earliest coins look more like miniature sculptures than modern industrially produced coins, and unlike the Owl of Athens, most were used locally. For example, early siglos and double siglos of Lydia, where coinage began, are found in hoards unearthed in and around Lydia but not very far beyond. The same is true for the coins of most Greek city-states (*poleis*). It was only important that local people agreed upon the value of these coins. As commerce and the Athenian empire expanded, the need arose for coins whose legitimacy was easily recognized over an ever larger geographic area, so that traders from Athens, for example, could easily purchase cotton from Egypt or grain from the Black Sea or Italy, and Athens could pay its sailors and maintain its far-flung fleet. Seventy years after the fall of Athens in the Peloponnesian War, Alexander the Great recognized the importance of a uniform currency. He minted much of the Persian treasury he captured into a single set of gold and silver coin types that were used throughout his empire, from Macedon to Babylon and Egypt.



Plate II.1T. Lydia under Persian Rule, Kroisos, 561-546 BC. AR Double Siglos (10.38 g). Confronted foreparts of lion and bull/Double incuse punch. Rare and important. *Traité* pl. 10, 7, SNG von Aulock 2809.

The most famous of ancient coins, the silver tetradrachm (4-drachm piece) of Athens, might be considered the world's first Euro. It bore the *tipos* (τιππος) or image of Athena on one side, and on the other, the owl with whom Athena was associated, together with the letters AΘΕ for Athens. The "Owls" of Athens appear in the comedies of Aristophanes in the late 5th Century BC, and their presence in hoards discovered all around the Mediterranean, from

Sicily to Egypt, testify to Athens' enormous commercial and military reach during this period. Owls were among the first coins to have images on both sides and to include an inscription of the city-state that struck them. The significance of this coin is celebrated on contemporary 1-Euro coins minted in Greece, which have a replica of the owl on their reverse. In my work as an economist, much of what I research and teach has to do with the problems of overcoming the costs of making transactions. The Owls of Athens enabled traders and armies to overcome the greatest transaction costs of their time.

But they were much more than this. In Burton Y. Berry's words:

"...The Greeks of long ago saw in their coins more than a medium of exchange. They were that, but they also were regarded as works of art in miniature."

He goes on to say that today they are not only works of art but also "testimonials of episodes in the lives of democracies and kingdoms." They have archeological value as records of religious beliefs, social and cultural events, economic livelihoods and relations among city-states, and political struggles.

The descriptions of coins in this book tell stories about such remarkably diverse themes as gods, goddesses and flying horses, wars and conquests, migration and colonization, philosophers and mathematicians, the exile of illegitimate children, extinction, the imitation of art, Olympic victories, and human mortality and immortality. Such are the inventions of the ancient Greeks, struck upon small disks of silver, gold, bronze, and electrum (an alloy of gold and silver) whose original purpose was economic, to simplify transactions.

Millions of ancient coins survive today. You'll find a magnificent collection in the Numismatic Museum of Athens, beautifully exhibited in what was once the mansion where Heinrich Schliemann, the archeologist who found the ancient city of Troy, lived.¹ The British Museum, the American Numismatic Society, the Biblioteque Nacional of France, and a number of other museums also have grand collections of ancient Greek coins. There is also a thriving international marketplace. Far more coins exist than can fit into museums, as evidenced by the occasional sales by museums that have multiple specimens struck from the same dies in their collections. The internet makes thousands of ancient Greek coins in auctions accessible to everyone with the click of a mouse.²

¹ The Athens Numismatic Museum's website is http://www.enma.gr/index_en.htm.

² The biggest ancient coin auction house in the United States is Classical Numismatic Group (<http://cngcoins.com/>). Others around the world include Numismatic Ars Classica (<http://www.arsclassicacoins.com/>) in Zurich, Gorny and Mosch (<https://www.gmcoinart.de/>) in Munich, and Baldwin's (<http://www.baldwin.co.uk/>) in London, but there are many others. You can learn about current auctions and prices realized at past auctions by visiting CoinArchives (<http://www.coinarchives.com>). Click on "CoinArchives Ancient Coins," search your favorite

I decided to learn about Owls and hopefully obtain one that I could share with my children and friends and use in my teaching. The search for an Owl took me to the website of Paul Rynearson, a dealer in ancient coins who, I quickly discovered, was a true scholar, as well. I pestered him with questions, from why Owls were as abundant yet expensive as they were, to where ancient coins come from (hoards) and how we know that they are real. His patient and detailed answers to my questions set me on the road to becoming a student of ancient Greek numismatics instead of simply a seeker of Owls.

I am particularly indebted to Paul, without whose guidance and assistance this work would not have taken shape, and to my sons, Julian and Sebastian, for their kids' enthusiasm and for being my companions on numerous ancient numismatic adventures. In many ways, this work is joint with them.

ancient Greek god or goddess (Zeus or Athena is a good start), hero (Ajax, Alexander the Great), animal (owl, Pegasus), or almost anything else you can think up, and see what you get!

I. Coins and Ancient Economies

Today there are markets for everything, from all the food and other stuff we consume to pig futures and even risk (insurance) and promises (credit). If you bought this book, it is likely that you used a credit card. The bank paid for it, and in return it got a promise that you would repay the loan—with interest. In the ancient world I'd probably be dead by now. If I died today, my life insurance and retirement savings would help my family out. With insurance, you pay a premium in return for the promise the insurance company will pay out if the bad thing happens. Credit can help, too. If my income goes down, I can keep food on the table with my credit card, so credit can be insurance. I can also pull out my savings. With savings, you buy a promise from the bank to give you back your money, with interest. Without credit, savings, or insurance, we'd have to find another way to get through hard times and old age. With markets, what we consume has nothing to do with what we produce. That's certainly true for my household (thank goodness, given my subpar gardening skills!). It's also true for cities, states, even countries, because trade lets us separate what we consume from how we get our income.

The ancient world was obviously pretty different from our world, though the same economic rules applied. What you couldn't buy, you had to produce yourself. So did your city state. And in order to buy, you had to have something to exchange. That didn't have to be coins. It could be goods (barter) or other kinds of currency: chunks of gold, silver, bronze, iron, even beans and sea shells in some parts of the world. To our best knowledge, though, most of what people consumed they produced themselves. Trade happened at the fringes, like in the Jack and the Beanstalk fable where little Jack's widowed mother sends him to market with a precious old cow to sell. To his mother's chagrin, Jack barter the animal for five beans (which luckily turn out to be magical).

This isn't so different from how much of the world lives today. I recently visited a weekly market in a small town in the Tigray province of Ethiopia. The town had only a couple thousand people in it, but that day its population swelled to over thirty thousand. From all directions, as far as the eye could see, a stream of people walked to the market from villages all around. I go the market with empty bags and cash (or credit cards) in my pocket. They came with bags of grain, animals, or vegetables to exchange for whatever they needed (but did not produce) at home. In the Tigray market, most people sold one thing, got paid in *bir* (Ethiopia's currency), and used the cash to buy other things. In ancient times they were more likely to barter one thing for another. Selling something for currency that you then use to buy something else makes transactions a lot simpler.

There are other similarities between poor villages today and ancient economies. For one thing, most people in the world today do not have credit or insurance. That doesn't mean they can't save or insure themselves against bad events, but they have to find other ways to do it. For example, in good times they can buy an animal. The animal is like a bank, and if the animal fattens up

and becomes more valuable, that's like earning interest off your savings. If the crop fails, you can always sell your animal, so it's like having an insurance policy, too. People in villages also help each other out in times of need, and that's also like insurance. (That kind of insurance doesn't work so well if everyone's crop fails!) They informally loan money to each other, which is an informal credit market.

In ancient times there were no banks or insurance companies. (Actually, in Athens we can find the beginnings of both, for shipping.) Of course, people still saved, and they had to find ways to insure themselves against terrible events. People kept animals and no doubt helped each other out in hard times.

They also had *hoards*. Hoards are like keeping money under the mattress. Usually coins of gold or silver were placed inside a metal box and hid somewhere safe: inside a wall, under a floorboard, buried in the back yard. Usually people kept track of their hoard, but occasionally hoards became lost. Armies invaded, people died or became senile—every hoard that has been discovered no doubt has a tragic history behind it that we most likely will never know.

Until around 650 BC, when people did use currency to buy and sell, it was not money they used, though. There were no coins, so it had to be some other currency. Coinage represents a third stage in the evolution of exchange.

The first was barter, in which the value of goods exchanged depended on the nature of each transaction (for example, a certain number of my bronze bowls for your head of sheep, with the remainder perhaps made up of a bushel or two of wheat).

Barter eventually was replaced by a more convenient system in which some object in common and limited supply was used as a medium of exchange, or *currency*. The object chosen varied from place to place. To the East, in Mesopotamia and Egypt, precious metals were used as currency and carefully weighed for each transaction. In Homer's *Iliad*, the basic unit of value was an ox. This was logical in a region where gold and silver were not yet sufficiently abundant to constitute a unit of commerce, or currency, because an ox is indivisible (without turning it into something else!). When metals were used as currency for trade around the Mediterranean, their values were adjusted to the ox-unit. In the Aegean, the gold unit of value, or *talant*, weighing 8.5 grams, was the price of an ox. The equivalent value was about 13 times heavier in silver. It reached 25½ kilograms (about 60 pounds) or more in bronze or copper, depending on the local availability of these metals. There exist bronze *talants* of about this weight, cast in the shape of ox hides. Further to the west, in the Peloponnese, there were no mines of copper or gold, but there was iron; thus, bar iron was used as currency. Sparta, Argos, and other Greek states used iron spits (*obolos*), with six such spits filling the hand, or grasp (*drax*).

Metals were more practical currencies than oxen, and naturally over long distances small amounts of precious metals were more practical to move around

than heavy pieces of bronze or iron worth the same amount. However, they had to be weighed and re-weighed for every transaction.

Aristotle described how a recognized authority, by striking ingots of gold, silver or electrum (a naturally occurring alloy of the two) with a mark certifying the quality and weight of the metal, could vastly simplify transactions. The invention of coins likely had its roots in the effort to reduce transaction costs.

Early coins were valued only for the bouillon they contained, as the proliferation of test cuts found on ancient coins attests.³ The easily recognized type or image struck upon them by a governing authority certified the weight and quality of this bouillon.⁴

The very first coins were of electrum struck in Lydia, on the west coast of what is now Turkey, in the 7th Century BC—perhaps around 650. Electrum coins from the eastern Mediterranean never left their region of minting or became a general medium of interchange with other parts of the Greek world. However, from Lydia, the *idea* of coinage spread westward, first to the island of Aegina, off the coast from Athens, and then to city-states (the Greek *poleis*) around the Mediterranean.

Early coins of eastern kingdoms as far away as India and China bear inscriptions, some of which are quite beautiful, but generally not images. To the west, master engravers in hundreds of Greek *poleis* transmitted the artistic advances of ancient Greece onto the new medium of coinage, turning the minting of coins into a sort of lithography in silver, gold and (a bit later) bronze. The 1903 *Handbook to the British Museum* (Cook, p. 490) notes that many ancient Greek coins are “among the most exquisite productions of ancient art.”

³ As Kraay (p. 323) notes, “Coins will have been in greatest demand in the area controlled by the minting authority; beyond that they will have been in demand in places in regular contact with the area of origin; elsewhere they will have tended to revert to the value of bullion.” It was common for states to use other mints’ coins as bullion to strike their own, either by melting down the silver or, if they shared the same weight standard, by “over striking,” that is, striking new images on top of the old.³ For example, many coins of Achaean colonies of Croton, Sybaris and Metapontum in what is now southern Italy restruct on Corinthian coins of the archaic period. The coins of Aegina, Athens and Corinth were exceptional in terms of their geographic reach and their influence on the coinages of other city-states.

⁴ Kraay (1976, p. 20) describes the unique collection of early electrum coins found along with other datable artifacts during the British Museum’s excavations of the Artemision at Ephesus in 1904-05. It includes unmarked lumps weighing 1/8 and 1/24 of a Milesian (or Lydian) stater, typeless pieces with a punch mark on the reverse to test that the coin was of precious metal throughout, similar pieces but with the other side striated with parallel lines, apparently to prevent slipping; true coins with both striations and an Artemision type (confronting cocks, goat’s head); and finally, coins bearing a type (lion’s head, seal’s head) but without the striated lines. Kraay interprets these as representing a sequence of phases in the early evolution of coins. The archeological dating of this deposit is the early 6th Century. The continued survival of “pre-coins” and the small range of true coins in this excavation suggest that the beginning of coinage was somewhere around the middle of the 7th Century BC.

Because of this, the study of ancient coinage entails a fascinating combination of economics, history and art.

To produce coins, die-makers hand-carved images onto pieces of hardened metal, usually bronze, as the reverse, or *intaglio*, of what the finished coin would look. Usually the *tipos* or images on the coins of a city-state did not change over long periods of time, yet the level of artistry in these images ranged from workmanlike to masterful. Some die makers were so revered as artists that they “signed” their dies by carving their identifying initials or symbol somewhere within or next to the *tipos*. The most famous of all die makers was Kimon of Syracuse, whose first “facing head” *tipos* of Arethusa influenced die makers across the Greek world, but there were many others, both from Syracuse and other *poleis*.

Once sculpted, the die left the hand of the die maker, much as the lithography plate, once completed, goes to the printer. The great lithographers of modern times, once their plates were etched, sometimes were actively involved in the printing process. For others, a master printer took over, the artist no doubt looking over his or her shoulder. In the case of ancient coins, we have no way of knowing to what extent the die maker looked over the shoulder of the workers—usually slaves—who prepared and struck the coins; however, we do know about the process that was used. Carefully weighed disks (flans), probably softened through heating, were placed between the top (reverse) and bottom (obverse) dies atop an anvil, then struck (typically three times) by a hammer. Even when struck from the same die, no two coins came out the same. We find well-struck and lightly-struck coins; well-centered and off-center images (in many cases partly off the flan); and “double strikes,” in which the flan shifts slightly between blows of the hammer. The positioning of the obverse and reverse images relative to each other also varies. On a modern-day U.S. coin this relationship is ↓6, meaning that if one holds the coin so that the head is straight up (pointing to 12 o’clock), the tails side points straight down (towards 6 o’clock). On ancient Greek coins the relationship between obverse (heads) and reverse (tails) more often than not is random, depending on how the two dies happened to line up on a particular strike.

Coins were an invention of the Archaic period, which also witnessed the creation of Greek colonies all around the Mediterranean in the 8th and 7th Centuries BC and what Forrest (1986) calls “the characteristic and peculiar element in Greek political life,” the *polis* or city-state. From the late archaic age (the 6th Century BC) through the classical period (roughly the 5th Century BC) and up to the conquests of Alexander III (“The Great”) in 335-323 BC, local coinages flourished in Greek city-states around the Mediterranean. Each locale that struck coins had its own *tipos*. Examples include Athena and her owl in Athens; the sea turtle in Aegina; the Pegasus in Corinth; the wheat ear in Metapontum; the boy riding a dolphin in Taras; a rose in Rhodes; a nymph carried off by a Satyr on the island of Thasos; horses in Larissa; the nymph Arethusa and chariot of Syracuse; and the hare of Messana.

These images conveyed the authority of the local state, but they also reflected the identities of Greek city-states and their people. Larissa was famous for its horses, Metapontum for its grain. Tarsos on the dolphin was the legendary founder of Taras. The sea-turtle was a logical type for Aegina, renowned in ancient times as an island of sea traders. Athena, goddess of Athens, and her owl replaced the *tipoi* of the oligarchic families of Athens around 625 BC. Arethusa, the local fountain goddess of Syracuse, appears on the obverse of the Syracusan tetradrachm; Dionysus on the stater (major coin) of Thebes, famous for its wine; and the Pegasus, who according to legend was tamed by Bellerophone in Corinth (with the help of Athena), is on all silver coins of that city-state. The coins of Kyrene bear the plant or fruit of the now-extinct silphium plant, famous for its medicinal and culinary properties and the mainstay of the Kyrene economy. The artistic quality of dies and thus of the coins struck from them varied enormously from *polis* to *polis* as well as from one die maker to another.

The subjects portrayed on coins and the artistic development of coinage evolved through the complex human interactions that accompanied commerce, migrations, and conquest. Maritime trade spread the idea of coinage from the Eastern Mediterranean to the sea-faring island of Aegina. The Pegasus of Corinth appears on coins of Corinthian colonies in Magna Graecia (Southern Italy and Sicily). Carthage first learned to strike coins in Sicily, during its occupation there, as a means of paying its mercenary armies. It employed Greek die engravers to produce a coinage displaying a fusion of images of North Africa, Sicily and Macedon. The migration of Pythagoras, the famous mathematician, from the island of Samos in the eastern Mediterranean may have spawned the unique incuse coinages (the *incusi*) of Metapontum, Sybaris, and other Greek *poleis* in what is now southern Italy. States to the East struck their own crude versions of Athenian Owls.

The apex of numismatic art was at the end of the 5th Century on the island of Sicily. The artistic advances in Sicilian coin making, like the idea of depicting deities facing head-on instead of in profile, influenced the coinages of city states in other parts of the Greek world and, ultimately, modern coinages the world over.

In short, the hand of the die maker teaches us the ways in which ideas as well as commerce spread in antiquity.

Weight Standards

Relationships among the coinages of different Greek city-states are sometimes reflected in the weight standards they employed. A diversity of standards was used in the ancient world. They reflected the local values of gold and silver relative to the weights of other metals (e.g., iron) that may have been used as currency before coinage. For example, the electrum stater of Lydia or Milesia weighed 14.1 grams; the Persian gold daric weighed 8.35 grams; the

Aeginetan silver stater weighed 12.2 grams; the Corinthian silver stater, 8.6 grams, and the Attic silver tetradrachm (struck at Athens), 17.2 grams. What is more confusing is that the same terms were used for coins of different weights. Table 1 displays the weight of one drachm in both grains and grams under the six major weight standards used around the Mediterranean prior to Alexander the Great's conquests: the Attic, Aeginetic, Phoenician, Rhodian, Babylonian and Persic.⁵

Table 1. Weight of a Drachm Under Different Ancient Weight Standards

| Weight Standard | Weight of 1 Drachm | |
|-----------------|--------------------|-------|
| | Grains | Grams |
| Attic | 67.5 | 4.37 |
| Aeginetic | 97 | 6.29 |
| Phoenician | 56 | 3.63 |
| Rhodian | 60 | 3.89 |
| Babylonian | 84 | 5.44 |
| Persic | 88 | 5.70 |

The Ionian coin systems in what is now Turkey, with their origins in the Bronze Age, had fixed a ratio between gold and copper. The Persian weight standard was derived from the Lydian system of King Croesus, whose reign is credited with the invention of the bi-metallic coinage of gold and silver, but with a higher value for the daric (Lydian 8.05 grams) and occasional adjustments reflecting the relative worths of gold and silver. This standard was used widely in Western Asia Minor, in Cyprus, and in other Persian-controlled territories.

In the Peloponnese, the large peninsula forming southern Greece below the Sea of Corinth, the currency prior to coins was in the form of iron spits (*obelos*). History has it that this iron-age system was first replaced by coins under the reign of King Pheidon of Argos, who established a ratio between iron and silver of 400:1 for the coinage of Aegina (Seltman, p. 35). There is some doubt as to whether Pheidon really was responsible for Aegina's (Europe's first) coinage, but there is no doubt about the relationship between coins and iron spits. Even the money of modern-day Greece before the introduction of the Euro betrays this. Its basic unit was the drachma.

In the Pheidonian weight system, which was the basis for Aegina's coinage, a silver *drachm* of slightly more than 6 grams was the equivalent of a *drax* (handful) of 6 iron spits (*obelos*). The word drachma, commonly found in modern coinages around the Mediterranean, thus is derived from the ancient Greek *drax*, meaning "handful." Herodotus and others claimed that, upon

⁵ The weights of ancient coins are most commonly given in either grams or grains. Most contemporary works use grams (g); however, the classic work of Head uses grains (grs). 100 grains is equivalent to 6.48 grams so that, for example, an Athenian tetradrachm of 17.2 grams is reported in Head's book as weighing just under 270 grains.

introducing coinage at Aegina, Pheidon dedicated the previous currency of iron spits at the temple of Argive Hera. An offering of iron spits was uncovered by archeologists at that temple (Seltman, p. 34).

Many city states shared the same weight standards, and the geographic patterns of weight standards reflect commercial and other relations among city-states. Logically, if a goal of coinage was to simplify transactions, it made sense for city states to adopt a weight standard shared by their major trading partners. Seltman (p. 36) states that it was probably after the collapse of Pheidon's empire, around 656 BC, that Aegina's numerous neighbors began their coinage based on the Aeginetan model.⁶ Aegina set the weight standard for many other Greek city-states, including those of the Peloponnese; the southern Aegean islands and Crete; and to the north, in Boeotia, Thessaly and other states in whose trade Aegina was prominent. Hoards of archaic coins uncovered in these places contain few non-local coins except for Aegina "turtles."

Other city states set their own weight standards, still based on the *obol* and *drachm* but with different values locally. Besides differences in the local cost of silver and the weights of local currency of other metals used prior to silver, it is not clear what accounts for these weight differences, only that multiple weight standards existed simultaneously, no doubt with deep historical roots.

The Attic standard was used in Athens as well as in Euboea, the 90-mile-long island straddling the Greek mainland to the north of Athens, and the Chalcidice, the peninsula shaped like a hand with three fingers jutting southward from northern Greece into the Aegean Sea. It is no wonder: both areas were easily accessible by ship from Athens.

Corinth, because it was located at a crossroads among city-states with different weight standards, is an interesting special case. It had a distinct weight standard that was compatible with both the Attic system, predominant to its north, and the Aeginetan system, to the south. The Corinthian drachm weighed less than the Attic one, but a Corinthian stater or "colt" (comprised of three Corinthian drachms of about 2.85 grams each) could easily pass as one-half of an Athenian tetradrachm (that is, a didrachm). At the same time, one Corinthian drachm was nearly equivalent to an Aeginetic *hemidrachm* (half-drachm; Head, p. 399). This almost certainly was no accident. It enabled the geographic reach of Corinthian money to extend far beyond the territory in and around the city-state of Corinth.

Both the Attic and Corinthian standards moved westward, via commerce and colonial ties—the Attic to Sicily and South Italy, the Corinthian to Northwest Greece and South Italy.

⁶ There remains some uncertainty about the exact years of Pheidon's reign.

In 335 BC, Alexander the Great chose the Attic weight standard for his coinage, creating a uniform standard throughout his vast empire and ensuring that this would remain the dominant standard in the Mediterranean up to the Roman conquest.

Uses of Early Coins

A puzzling feature of the earliest coins is that most that survive were of denominations too large for retail trade, and some, like the commercially impractical decadrachms struck for short periods at Athens and Syracuse, almost certainly were commemorative issues. The original purpose of minting coins of silver and gold probably was to facilitate payments from the state (e.g., to build ships or pay armies) or collect taxes. Coins of large denominations were also a compact way to store wealth and conduct commerce involving relatively large quantities of goods, for example, ship trade around the Mediterranean.

Nevertheless, as Howegogo (1995) notes, the issues of fractional coinage, even in the archaic period, might be much greater than once thought. It is hard to imagine commerce not driving the rapid spread of coin use in the ancient Greek world. In some city-states, the creation of ever smaller denominations of coins seems to have accompanied the expansion of local commerce. In Corinth, as early as 500 BC there were silver half-obols (hemibols) weighing less than $\frac{1}{4}$ gram. In ancient Athens, coinage was prolific and of denominations as small as 0.15 grams, so tiny that they were carried in the mouth, “pouched in one cheek” (Seltman, p. 109).

There exist prolific records of state pay to navy and military personnel, jurors, builders of public buildings like the Parthenon, and even a 2 obol payment by Pericles to allow every citizen to attend the theater. All of this coinage must have circulated through local commerce. In Aristophanes’ fifth-century comedy *The Wasps*, the state treasurer in Athens runs out of change, and he has to give two jurors one drachma to share. They change it in the fish market.

The use of a precious metal naturally creates the necessity for coins to be of a very small size in order to be useful for daily transactions. In Aristophanes, one of the jurymen mistakes a tiny coin for a fish scale and spits it out of his mouth. Aristotle considered barter as being a thing of the past and used by uncivilized tribes. The implication is that market exchange was the norm in his society (Aristotle, *Politics*, 1257a).

In time, bronze and other metals were used to strike token coinages, that is, coins with a value greater than that of the metal used to make them. These were used for local commerce, avoiding the inconvenience of working with tiny bits of silver and gold in the marketplace. The value of a token coinage could be maintained by a state’s guarantee to exchange token coins for silver at a

promised rate. Although usually less well preserved than gold or silver coins, many bronze coins from the ancient Greek world survive and can be seen in museums, private collections or auctions.

Sources on Ancient Greek Coins

Many excellent books have been written on the coinage of ancient Greece. For an introduction, one cannot do better than to read Jenkins (*Ancient Greek Coins*, 1990). Norman Davis (1967) gives readers a delightful tour of Greek city states and their coins, using his particularly artistic collection now at the Seattle Museum of Art. For more detail, Colin Kraay's *Archaic and Classical Greek Coins* (1976) is comprehensive and accessible; however, it does not include the Hellenistic period, following the death of Alexander the Great in 323 BC. Seltman's *Greek Coins*, published in 1933, remains a classic. Barclay V. Head's *Historia Numorum* (1911) is the most authoritative and comprehensive volume on ancient Greek coins and an indispensable reference, now available on line.

Specialized studies of coinages and illustrated descriptions of private and museum collections fill out the ancient numismatic library's shelves. Examples include the American Numismatic Society's collection documented in its *Sylloge Nummorum Graecorum*, the 29-volume *British Museum Catalogue of Greek Coins*, the *Catalogue of the Calouste Gulbenian Collection of Greek Coins*, the Royal Collection of Coins and Medals of the Danish National Museum⁷, the *Arthur S. Dewing Collection of Greek Coins*, and the description of the John Ward collection, *Descriptive Catalogue of Ancient Greek Coins*, among others. Studies of coins from particular mints include Starr's classic book, *Athenian Coinage*, Ravel's book *Les "Poulains" de Corinthe (The Colts of Corinth)*, S.P. Noe's *The Coinage of Metapontum*, and M.J. Price's comprehensive, two-volume work entitled *The Coinage in the name of Alexander the Great and Philip Arrhidaeus*. In short, there is no lack of information about ancient Greek coins, and the books that document these coins, more often than not, are now out of print and themselves collectors' items. A list of my favorite texts and references on ancient Greek coins appears in the References.

The Supply of Ancient Greek Coins

The goal of this monograph is to explore the evolution of ancient Greek coinage as commerce and other human activities expanded around the Mediterranean. Selected coin types and mints from a variety of city-states and periods from the beginning of coinage and the Roman conquest are used to illustrate this theme. Despite their diversity, no effort is made to provide a

⁷ These volumes, like those of the ANS, are called *Sylloge Nummorum Graecorum*.

comprehensive cataloguing of ancient Greek coins. For that, one can do no better than to consult Barclay Head's classic opus.

What makes this study possible is that many coins from ancient Greek city-states have survived more than 2,000 years to find their way into museums and collections around the world, and they have been meticulously documented. The supply of ancient coins actually is increasing as new hoards are found, occasionally yielding previously unknown types as well as new specimens of known types that are studied and put in order by numismatists. A hoard is any group of coins, however small. Rynearson writes:⁸

Coins that are found tend to come as single finds, family caches or large treasury hoards. Single finds are often of low grade and usually bronzes. Family hoards tend to be groups of coins of precious metals, which families entrusted to the eldest male; they were selected specimens of coins circulating at the time. There were no banks, so wealthy families hoarded money in the most precious metal possible. Their coins often were placed in a container, such as a metal box or pottery vessel. Treasury hoards have the largest number of coins in them, at times many thousands. Usually of silver, but sometimes of gold, they are normally found in metal boxes. In this type of hoard the coins are usually in the highest state of preservation, as they had not yet been given out in payment to mercenary soldiers, magistrates, etc.

Some hoards are uncovered by archeological digs, but most are found by accident, unearthed in farmers' fields or at construction sites. Archeological evidence accompanying discovered hoards can provide important clues about the coins, including when they were struck, but sadly, the vast majority of hoards are broken up and sold before they can be catalogued. Treasure trove laws can be designed to encourage explorers to make the contents of newly discovered hoards available for study and incorporation into museum collections. (The United Kingdom's "Treasure Trove" laws have become a model in this regard.⁹) Most, however, do not, and overwhelmingly country laws create incentives to sell off hoards as quickly as possible after they are found. This often involves breaking them up and losing the opportunity to study them.

Today, many of the finest surviving ancient Greek coins are in museums. The best-known collections are at the British Museum in London and the American Numismatic Society in New York. (Others include the Numismatic Museum in Athens, the Bibliothèque Nationale in Paris, the Royal

⁸ Personal correspondence.

⁹ This *National Geographic* Magazine article, "Finders Keepers? Not Always in Treasure Hunting," has a great description about how UK treasure trove laws work: <http://news.nationalgeographic.com/news/2013/03/130306-finders-keepers-treasure-hunting-law-uk-us/>.

Danish Museum in Copenhagen, and the Boston Museum of Fine Arts.) However, many extraordinary coins—and a vastly larger number of less extraordinary ones—are in private collections.

Over the years, a number of famous private collections have been auctioned off, and the catalogues from these auctions have become collectors' items. Several reputable auction houses and dealers make ancient Greek coins available through occasional mail auctions and on-line and catalogue sales. The vast majority of these coins are genuine, and most forgeries are easy to spot with the trained eye, but not always. (See Appendix A for a discussion about forgeries). Condition and artistry are distinct traits of ancient coins, and often it is not the most artistic specimens that come down to us in the best condition. Curators and collectors therefore must make trade-offs between the two when building their collections.

The Organization of this Book

The rest of this book is organized as follows:

Part I describes early Asiatic Greek coins of Lydia and the Ionian city states in the western part of what is now Turkey, as well as the electrum coinage that persisted in some places after Lydia had introduced its bi-metallic coinage of gold and silver. The Lydian siglos and double-siglos are among the earliest coins ever struck. Their *tipos* of the facing lion and bull was inherited from the period prior to Persian rule, under King Croesus. However, it was soon replaced by the Persian type of the running king-archer, first issued by Darius and now known as the gold “Daric.” The king-archer, like the earlier Lydian coins, had a design only on one side, the reverse bearing only the mark of the punch (called the “incuse”). One-sided coinage persists longer in the eastern Mediterranean than in the city states to the west, where the idea of adding a top die (the “reverse” type) struck by the punch, appeared early on.

The coinages of Aegina, Corinth and Athens are described in Part II. The island of Aegina, the most important trading center in Greece in the first half of the 7th Century BC, not surprisingly was the first to strike coins in Europe, perhaps while under the rule of King Pheidon of Argos. The Aeginetan stater featured the leather-backed turtle (*Chelone caouana*) and is found in hoards excavated over a wide geographic area, reflecting the reach of Aeginetan trade. Athens and Corinth produced the two other most significant early coinages and two of the most famous types in the ancient Greek world: the Owl of Athens and the Pegasus, or “colt,” of Corinth.

The archaic period continues into the 5th Century BC. There is a gradual development in the artistry on coins. This development accelerates and the designs on coins proliferate in the late 5th through late 4th Centuries BC. Despite an attempt by Athens to impose its Owls on other city-states via the Coinage Decree sometime between the mid and late 5th Century BC, about 1,000 Greek city-states had their own mints and *tipos*, at least for a time (and some apparently for a very short time). Part III describes coins from city-states in northern and central Greece, the Greek islands, and Kyrene in North Africa. Part IV presents coins of Magna Graecia (Sicily and Southern Italy) and Carthage.

The conquests of Alexander the Great transformed the numismatic landscape of ancient Greece. Part VI describes the numismatic legacy of Alexander, whose coins, interestingly, borrowed part of their design from the coins of the Persian satraps in the lands Alexander would conquer.

Greek coinage was again transformed following Alexander III’s death in 323 BC, which ushered in what is known as the Hellenistic period. The empire was carved up among the *diadochi*, Alexander’s generals and administrators who succeeded him. Hellenistic coins after Alexander’s death are the subject of Chapter VII.

About Die Numbers

Throughout the text here and in other books about ancient numismatics, coin descriptions include references to die numbers. The dies used to strike ancient coins almost never survive (what mint would not destroy its dies once they have outlived their usefulness?). Nevertheless, by carefully comparing coins it is possible to ascertain which were struck from the same dies, and in what sequence. For some city-states (e.g., Syracuse in the 5th Century), almost complete die records exist, so that discoveries of new hoards rarely produce a coin whose die has not already been catalogued. For others, die studies are less complete.

Die numbers identify the connection between coins and dies that have been catalogued by the most authoritative die studies, which are different for different coins. For example, the most authoritative die study of the coinage of Metapontum was done by Noe, and the Nomos of Metapontum in Part V was struck from Noe's die number 193. The obverse of the tetradrachm of Lysimachos in Part VII was struck at the mint at Smyrna from Thompson (*Essays Robinson*) die number 237. It is the only obverse die known to exist from that mint, and this coin is one of only eight examples known to exist at the time of Margaret Thompson's study.

Speculation and Fact

It is worth pointing out that in some cases the study of ancient coinages involves more speculation than fact. Some interesting theories have emerged to explain such puzzles as the origins and uses of ancient coins and the choice and evolution of coin types. Little by little, new evidence emerges to add to the empirical record and shed light on these questions, sometimes forcing us to rethink what we thought we knew about particular coinages. In the mean time, much of the fun of studying ancient numismatics is to take what is known and use it as a basis to theorize about what is not. The greatest ancient numismatists are experts on classics and ancient societies, economies, and politics as well as coins, and much can be learned from their theories even when, in Edward T. Cook's words, they are argued "more ingeniously than convincingly (Cook, 1903, p. 501)."

II

The Beginnings of Coinage

Lydia (6th and 7th Centuries BC)

Archeological evidence places the origin of coinage at around the middle of the 7th Century BC. The earliest coins were struck in Lydia in electrum. They bore an image on the obverse, carved in intaglio into a die, but on the reverse there appears only the mark left by the end of the punch used to strike the coin, known as the "incuse." It was not until later that the idea of also

carving an image into the punch (or a die struck by the punch) seems to have occurred to coin makers. The introduction of gold and silver coins (bimetalism) is attributed to Croesus between 560 and 545 BC. The double siglos shown at the beginning of this paper, a rare denomination, was one of the two staters thus created, the other being a gold stater of the same weight. Soon thereafter the silver stater was replaced by a half-stater.

This specimen of the silver double siglos, dating to 561-546 BC, has a very deep reverse incuse, reflecting its great age and having been struck close to the beginning of all coinage. The coin has the normal "fingerprinting," a mottling of the surface which developed through the pressure of its burial over such a great period of time. (Because these archaic coins were buried deeper in the ground than their later counterparts, greater pressure was exerted for longer periods of time.)

Coinage was a relatively new idea, and it was important for each new owner to be able to see the purity of the metal as deeply as possible, hence the great depth of the punches. As coinage became more accepted, the incuses became shallower and the traders had more confidence in the issuing authorities. After that, the incuse was superseded by a type all its own. This is an attractive example and certainly in the top percentage extant, according to Rynearson.

Lesbos, Mytilene

This coin of electrum exemplifies a fascinating stage in coin evolution, in which the simple punch on the reverse of the coin was replaced by an image—here, the intaglio of a bull whose head evidently was carved at the end of the punch. The use of electrum continued later on the island of Lesbos than in Lydia. A migration from nearby Samos, where the same method was employed, is credited with transferring a similar “incuse” technique to Magna Grecia or southern Italy (see Metapontum and Sybaris staters, below). There, however, the image on the reverse is the same as on the obverse but in intaglio, whereas here it is a different image altogether, with the convex head of a lion appearing on the obverse.





Plate II.2T. LESBOS, Mytilene. Circa 521-478 BC. EL Hekte (2.57 g, 4h). Head of roaring lion right / Incuse head of cow right; incuse rectangular punch behind. Bodenstein Em. 13 (unlisted dies); SNG Copenhagen 301; SNG von Aulock 1685; BMC 18-22; Boston MFA 1679-81; Gulbenkian 874-5; Pozzi 2315-6. EF. Triton X, Lot 280, Monday, 8 January 2007.

Lydia Under Persian Rule (Mid 5th Century BC)

The eastern Mediterranean, including Lydia, was conquered by Cyrus, the king of Persia, and remained under Persian rule until Alexander the Great's conquests in 336-323 BC. Persian rule also extended into northern Greece until the Greeks, led by Athens' navy the Spartan army, defeated the Persians, marking the start of the golden age of Athens. The gold *daric*, depicting the running king-archer on the obverse and an incuse punch mark on the reverse, became the dominant currency in the Persian-occupied Mediterranean. Coins were not the normal currency of the Persian Empire, but it would seem that they were needed in order to interact economically with the Greek world.



Plate II.3T. Lydia under Persian Rule, c. Mid-Fifth Century BC. AV Daric (8.32 g, 14.5 mm). Bearded archer (the Great King) in kneeling-running attitude right holding spear and bow; quiver with arrow at shoulder/Oblong incuse. Carradice (BAR 343) 27.

Kraay (p. 32) notes 3 types of the gold daric, of which the king carrying a bow and spear is one. This type came after the reign of Darius I. Possible occasions for its introduction are the accession of Xerxes in 486 or of Artaxerxes in 465. It was in use for most of the 5th and 4th centuries. Gold darics were equivalent to 20 silver siglos (or shekels). All had only an incuse punch mark on their reverse side. Persian coin production employed the incuse-

punch reverse long after it was replaced by reverse types elsewhere in the Mediterranean.

The example shown here is virtually mint state and flawless, with a pure gold color, on a larger flan than normally seen and with excellent detail and original mint luster. A fascinating aspect of the reverse is the presence of parallel wavelike patterns across the main face of the incuse.

III

The Coins of Aegina, Corinth and Athens

Three great coinages dominated the numismatic landscape in the 6th and 5th Centuries BC: the “Turtles” of Aegina, the “Colts” of Corinth and the “Owls” of Athens. The earliest of these three coinages was Aegina’s, but Corinth and Athens did not wait long before following suit.

The “Turtles” of Aegina

Aegina, a rocky island within eyesight of Athens, created the first major coin used for trade among the Greek Islands and with the shores around the Mediterranean and is believed to be the site of the first mint in Europe. It became the prototype for coinages of other islands around the Aegean as well as for many city-states on the mainland of Greece with which it had commercial relationships, which followed what was called the Aeginetan standard. (The weight standard of the Aeginetan drachma was a little over 6 grams. Athens, which was hostile to Aegina, adopted a different (“Attic”) standard of around 4.3 grams when it began issuing fine tetradrachms around 510 BC).

Aegina’s *tipos* was the turtle or tortoise, and the volume of “Turtles” found in hoards from the 6th and 5th Centuries is significant. For example, the definitive cataloguing of ancient Greek coin hoards by Thompson and Kraay reveals that even archaic hoards with mostly local coins frequently contained some number of Aeginetan staters. In the famed Asyut Hoard, discovered in Egypt and dated at around 475 BC, there were 133 turtles among the estimated 900 coins found (Price and Waggoner, 1975).

The Aeginetan stater’s reverse never bore a type of its own, only an elaborate incuse punch mark in the form of triangular and quadrilateral shapes, some of which on the latest issues enclose letters or symbols. The obverse had two main patterns. On the early issues (up to around 456 BC), it is a turtle whose carapace is marked by a row of dots.



Plate III.1T. Aegina, C. 550–456 BC. AR stater (12.51 gm). "T-backed" sea turtle seen from above, head in profile, row of five dots down center of shell / "Skew" pattern incuse of five compartments. Milbank pl. i, 15. Dewing 1674. SNG Copenhagen 507. Exceptional strike, centering and metal. Struck in high relief. Extremely fine.

The later types have a segmented carapace, commonly referred to as that of a land tortoise. One theory posits that a switch from sea turtle to land tortoise occurred following Athens' destruction of Aegina's fleet. However, Kraay (p. 42) points out the biological ambiguity of various branches of the tortoise family living in the sea or on land, in rivers or in marshes, so that varieties with segmented shells are not limited to land.



Plate III.2. ISLANDS off ATTICA. Aegina. Circa 370-350 BC. AR Stater (12.21 g, 1h). Land tortoise with segmented shell / Large incuse square of thin skew pattern. Milbank pl. 2, 14; Dewing 1686; SNG Copenhagen -; BMC 165; SNG Delepierre 1545. Superb EF, attractive dark iridescent toning, insignificant die break in obverse field. Rare. Ex Stack's (8 December 1986), lot 1655. This stater is from a brief transitional period between the heavy skew pattern issues and the later thin skew pattern issues with symbols on the reverse. CNG Triton IX Auction, January 10, 2006.

The "Colts" of Corinth

Corinth occupied a strategic location near the Isthmus that formed the axis of North-South trade, between the Peloponnese and Northern Greece, as well as East-West trade, between Ionia and Magna Grecia (Southern Italy and Sicily). Thus, it is not surprising that it would develop one of the earliest and most significant coinages of the archaic and classical periods. Corinthian coins first imitated and then diverged from the Aeginetan model. O. Ravel (*Les Poulains de Corinthe I*, Basel, 1936; and *II*, London 1948) documented the entire series of staters issued from the mint at Corinth. His work and subsequent revisions place the 65 recorded dies of the first phase of Corinthian coinage at around 570/560 to 515 BC.

The Corinthian stater, commonly called a “colt,” bears on its obverse one of the most famous types of the ancient world: the winged horse, or Pegasus. Pegasus was regarded as the creator of fountains, which he could cause to gush forth from the rocks with the strike of his hoof. The coin recalls the myth of Bellerophon, who with the aid of Athena tamed the Pegasus with a golden bridle beside the fountain of Peirene on the Corinthian isthmus. Pegasus is always accompanied by the archaic letter koppa (similar to a lower-case q), the initial of Corinth. On the reverse, there were changing patterns of an incuse punch. The earliest of these is a “Union Jack” pattern similar to that on the Aeginetan stater. It became formalized into a swastika-like design, shown here.

This earliest Corinthian coinage was modest in volume, comparable to that of Athens at the time but far smaller than Aegina’s. Nevertheless, it became the principal medium of exchange along all the coasts of the Corinthian Gulf and beyond, and Archaic “colts” appear in hoards uncovered throughout the Mediterranean. The largest hoards of colts have been found in Italy and Sicily, but archaic colts show up in places as far away as Egypt: The Asyut Hoard was found to contain 39 archaic staters from Corinth, including the fragment shown below. The Corinthian system of division by 3 and 6 (3 drachms=1 stater, 6 obols=1 drachm) and the weight of the stater (130 grains, equivalent to the light Babylonian stater of c. 130 grains) attests to its Asiatic origin.

In archaic times, Aegina dominated commerce on the eastern side of the Corinthian isthmus, while Corinth monopolized trade to the west. Corinth imparted the use of its weight standard to its colonies in the western Peloponnese and Italy as well as to the Achaean colonies of Magna Graecia across the Ionian Sea. The Achaean colonies of Croton, Sybaris and Metapontum in southern Italy sometimes restruck their coins on top of archaic Corinthian staters.



Plate III.3T. Corinthia, Corinth, c. 550-515 BC. AR Stater (8.55g; 22 mm.). Pegasos with curled wing flying left; koppa beneath / Quadripartite incuse square with internal swastika pattern in relief. C.f. Calciati (Pegasi) I, p. 159, 38 and 39. Dewing 1701. Pozzi 1645 (this obv. Die). Rare.



Plate III.4T. Corinthia, Corinth, c. 550-515 BC. AR Partitioned Stater (5.13g; 20 mm.). Pegasos advancing left on dotted exergual line; koppa beneath / Incuse swastika. C.f. Calciati (Pegasi) I, p. 151, 12. Ex Asyut Hoard 557 (this coin illustrated).

The only major change to Corinth's type in its entire history was the addition of the head of Athena to the reverse in around 515 BC (Kraay, p. 82), although the design of the Pegasus evolved artistically. This is illustrated by comparing the 6th Century staters above to this 4th Century coin. An unusual feature of this coin is the double wings of the Pegasus on the obverse. Also notice the Nike holding the fillet (ribbon) and flying behind Athena's head.



Plate III.5T. CORINTHIA, Corinth. Circa 350-338 BC. AR Stater (6.06 g). Double-winged Pegasos flying left, koppa below / Athena left wearing Corinthian Helmet; Nike flying left behind, holding fillet (ribbon). Ravel 1030. Ex-Wickinson Collection; Ex-Malter 11/92. Acquired from Richard Pearlman, Nov. 1, 2008.

The same type, with only stylistic differences, was struck at the Corinthian colonies. Lokri Epizephyrii, Bruttium, was a colony established by Corinth on the peninsula that forms the toe of present-day Italy. Barclay Head

describes Locri Epizephyrii as a flourishing agricultural city with two entirely distinct classes of silver coinages. One was of the Italic standard of neighboring towns, used for local trade. Corinthian staters of the Pegasos type were struck for foreign commerce, mainly with Syracuse, with which Locri was most intimately connected politically and economically, and with Corinth and its colonies of Acarnania, Corcyra and Illyria across the Ionian Sea on the Peloponnese. The minting of Pegasi in diverse locales represented a de facto monetary alliance and illustrates the reach and influence of Corinthian commerce and coinage. Lokrian Pegasi are much more often found in Sicily than in hoards unearthed in Magna Graecia (Italy). This is an outstanding specimen of a later-period colt, well centered and boldly struck.



Plate III.6T. Bruttium, Lokroi Epizephyrioi, c. 317-310 BC. AR Stater of the Corinthian Colonies type (8.65 g). Pegasos flying left/Head of Athena left wearing Corinthian helmet. Calciati II, p. 576, 10. SNG ANS 511.

Yet another example is this silver stater of Illyria, in Classical antiquity a region in the western part of today's Balkan Peninsula. This is a gorgeous coin with an outstanding pedigree, having been in the collection of Calciati II. It shows the head of Athena in her tall Corinthian-style helmet in the highest artistic style, with a club (representative of Heracles) and dolphin. Little is known about the coalition of tribes that constituted this area. However, the coin type reveals its strong connection with Corinth, to the south.



Illyria, Epidamos-Dyrrhachium. 334-330 BC. AR Corinthian-type Stater (8.46 g, 22 mm; 1:30 h). Pegasos flying right / Head of Athena right; dolphin, club and letter in field. Ex Ars Classica XV, lot 783; Calciati II, 38/3 (this coin). Of the highest classical artistry. Wonderful cabinet toning. Acq. Paul Rynearson.

On these coins, the Pegasus is now more classical in appearance, realistic, with musculature and straight wings, feathers almost discernible,

replacing the curled wings of the archaic period. Athena wearing the tall Corinthian helmet now becomes a trademark of the coinage of Corinth and its colonies. The archaic Greek letter koppa continues to distinguish the “colts” struck at Corinth.

Athenian Tetradrachms or “Owls”

The Athenian Owl dominated and facilitated commerce throughout the Mediterranean for more than a century. Around 625 BC it replaced local oligarchic types, which bore various symbols, to become the Athenian stater. After that, and particularly after Athens’ defeat of the Persians at Salamis in 480 BC and subsequent rise to power, it became recognized everywhere around the Mediterranean. It was the world’s first great international currency, with an economic importance far exceeding that of any other coin up to its time, including the Aeginetan turtles. The inclusion of the legend, ΑΘΕ, made it clear to the world that these coins were struck at Athens, indicating that this was, indeed, created to be an international coinage.

Owls played a dominant role in trade around the Mediterranean until an even more important currency, of Alexander the Great, displaced it after 335 BC. However, the two coinages were fundamentally different, in that Owls were struck only at Athens and were recognized and used for trade by other city-states, whereas the Alexander III coinage was of a kingdom, struck at multiple mints across Alexander’s immense empire.

Owls are abundant, found in hoards from Sicily to Babylon and beyond. Partly because so many were produced, their quality varies enormously. Athenian tetradrachms showing archaic qualities, struck before 435 BC, are rare and valuable. Rynearson lists the ideal artistic attributes of an Athenian tetradrachm thusly: “The owl’s eyes should be “buggy,” the beak should be well-delineated, and the dot work/feathers should be distinct. The fields should be even and relatively free of marks. Perfection does not exist in ancient coins; there are bound to be minor defects from being buried, impurities of the metal, problems of manufacture. We’re looking for coins that transcend insignificant flaws and become works of art.”

The one shown here has strength of strike, thick flan, is well centered, of sound metal with wonderful surfaces and a very light, natural toning. Most of all it has wonderful artistry. It displays the eye in profile, a slight smile, a full cheek and large head, qualities that help place the coin’s striking at circa 445 BC.



Plate III.7T. Attica, Athens, c. 445 BC. AR Tetradrachm (17.14 g). Head of Athena right, wearing crested helmet/Owl standing right, head facing, olive twig and crescent behind. Svoronos-Pick, plate 12, 21. SNG Berry 651. Boston MFA 1081. cf. Hirmer plate 119, 363. cf. Starr plate XXII, 4'. Broad flan, exquisite dies; exceptional.

In ancient times, when this coin was struck, it was the wage for one month's adjudication of a district judge.

A tetradrachm consisted of four drachms, each of which was equivalent to six obols. Thus, there were 24 obols in a tetradrachm.



AR Obol (0.69 g). Head of Athena right in crested Attic helmet decorated with olive leaves above visor and spiral palmette on bowl, wearing round earring and necklace / Owl standing right, head facing, with spread tail feathers, AΔE before, olive sprig behind, all in square incuse. (Original size above, detail below.) Jameson 1192. Delbeke 150 (s.d.). Starr Goup V, v. Jameson 1192. Delbeke 150 (s.d.). Acq. Freeman and Sear (G10475 W PABTR).

A fascinating aspect of Owls is that they did not evolve to reflect the enormous development of art in Athens during the 5th Century BC. No doubt this was because they were so successful and recognizable over such a vast area. As in the case of Turtles and Colts, commercial success engenders numismatic conservatism—why change a good thing? Small changes did appear after Athens' defeat of the Persians at the battle of Salamis in 480 BC: the laurel leaves were added to Athena's helmet and the olive branch and quarter-moon to

the obverse, as though to proclaim peace in the wake of battle. The basic design, however, stayed the same until the 4th Century BC.

Because so many Owls were struck, a complete cataloguing of dies does not exist and there is no "absolute" reference to the Owl series. The best that has been written is by Chester C. Starr: *Athenian Coinage, 480-449 BC* (Oxford, 1970). Until that time, the dating of Owl issues was somewhat haphazard. Now it is better but still not as precise as one would like. Most Attic tetradrachms are dated simply as "after 449 BC," the period of mass production. Starr stresses stylistic qualities in describing the phases of the Athenian coinage, including the size and proportions of Athena's head, the way the lower hair drops in front of her ear, the smile, and the angle of the owl on the reverse. By his scheme, the coin shown here would have been struck shortly after 450 BC, while Socrates walked the Agora and the construction of the Parthenon was just underway.

Athens retained the right to coin silver longer than any other Greek city-state, well into the period of Roman rule. The basic types remained Athena and the owl, but the style changed. The obverse now showed the head of Athena Parthenos adorned in a triple-crested helmet, and the reverse, an owl standing on an amphora, the names of two magistrates, and the personal symbol of the first magistrate, all within an olive wreath. On the coins struck after 186 BC, the amphora bears a letter indicating the lunar month during which the coin was struck. The coin below has a theta (θ), the eighth letter of the Greek alphabet, indicating that it was struck in the eighth month of the year.



Attica, Athens, c. 132/131 BC. AR Tetradrachm (16.94 g). New style, issued at Athens under Roman rule. Head of Athena in crested helmet r / Owl standing on amphora with head facing, inscription around. θ on amphora denotes month 8. Thompson 389e.

IV

Archaic and Classical Coins of Ionia, Northern and Central Greece and the Greek Islands

The late 6th to early 4th Century is the age of diversity in Greek coinage, as hundreds of city-states struck coins, each with its own local *tipos*. Weight

standards provide clues to where the issuing states' commercial, political or historical connections lay—whether with Persia, Attica (Athens), Corinth, Aegina, or elsewhere. Some coinages are prolific, suggesting the economic vitality of city states, while others are rare, coming from city states with economies so small that one wonders why they would have bothered to strike coins at all. Artistic and well-preserved specimens are almost always hard to find. Each coin type has its own fascinating history and provides insight into the mysteries of societies lost.

Boeotia, Thebes

North of Athens, rugged mountains run eastward to the sea, enclosing fertile plains whose city-states sometimes shared a federal coinage—that is, several local mints conforming to a similar type. Such was the case of the region of Boeotia, named after the Greek word for ox (βοῦς). Thebes, after defeating Athens at Koronea in 446 BC, was unquestionably the head of the Boeotian league. The basic type on Boeotian coins is a shield. The earliest coins had an incuse punch on the back. For a brief period in the later part of the 5th Century BC Thebes minted its most artistic coins, including this one with a portrait of Dionysos on the reverse and the shield on the obverse. This one is rare both because of the portrait of Dionysos and because of the club that appears in the top part of the shield on the obverse. Jenkins (p. 48) calls these obverses “masterpieces of relief and figure composition,” with Dionysos’ “splendid head decked with ivy leaves...as the god of wine [he] is also associated with the amphora which later became regular Theban type.” Kraay (p. 111) refers to these as among “the most original designs ever produced in Boeotia.” Thereafter, as Jenkins noted, the portrait of Dionysos was replaced by an amphora, which appears on the large number of Theban staters minted up to the conquest of Thebes by Philip II, the father of Alexander III (“The Great”) in 338 BC.



Plate IV.1T. Boeotia, Thebes, c. 425-395 BC. AR Stater (Early style). Boeotian shield with club across upper half/Bearded head right of Dionysos wearing ivy wreath; theta - Ε across lower field; all within square incuse. 11.95 g; 21mm. Head (*The Coins of Ancient Boeotia*) plate X, 5; BMC 58; Babelon pl. 200, 10; Pozzi 1422 (possibly of same dies). Cf. BCD Collection (Triton IX) lots 436 and 438 (but no club on shield & lesser artistry). High relief; an excellent early style example, which is very rarely encountered of this type.

Thessaly, Larissa

The city-state of Larissa was on the northern fringe of the fertile plane of Thessaly, surrounded and cut off from the sea by mountains that watered the area with streams. Centuries before the first coins were struck, this region was famous for the horses bred on its planes, and cavalry were the Thessalians' special arms. It is no surprise, therefore, that the horse became the basic type on the prolific issues of silver drachms and other denominations (none larger than a didrachm) minted at Larissa, the most important commercial city in Thessaly.

Head notes that the rich series of the coins of Larissa begins at an earlier date than that of any other Thessalian town. Ancient Larissa coins fall into four general types. The first, depicting a youth wrestling a bull on the obverse and Jason's sandal on the reverse, is extremely rare. The sandal of Jason on the oldest coins refers to the story of the loss of one of that hero's sandals in crossing the river Anaurus. The coins of the best period are of exquisite beauty, with the head of the nymph of the fountain Larissa, no doubt copied from the beautiful full-face head of Arethusa on contemporary tetradrachms of Syracuse. The three types from 450-320 BC form a sequence that nicely illustrates the artistic evolution of coins struck at this mint.

Larissa, 450-430 BC

This early drachm of Larissa depicts a youth restraining a bull on its obverse and a prancing horse on the reverse with Larissa (ΛΑΡΙΣΣΑ) spelled out backwards (as often was the case on very old coins; e.g., see the stater of Metapontum). The two sides of this coin and the one that follows form a single scene (Kraay, p. 115):

“On the obverse a young man wearing a petasos grapples a bull by the horns, while on the reverse the horse from which he has dismounted gallops off with bridle trailing.”



Plate IV.2T. Thessaly, Larissa, c. 450-430 BC. AR Drachm. Youth left, restraining bull; below, plants/Horse prancing right; ethnic counterclockwise, letters retrograde. 5.96 g; 18mm. BMC 19 (same obv. die). Ex Ward Collection 440. A very rare type in exceptional condition for the issue.

Bull sports such as this (*taurokathapsia*), reminiscent of rodeos of the American West, were a national pastime in Larissa, and they had religious associations, as well.

This coin type is usually seen with a poorly engraved obverse, but the one here seemingly was made from the best obverse die, and it has a particularly bold horse on the reverse, struck deeply in the incuse. This particular coin was once in the famous Ward Collection. John Ward was born in 1832 in Ireland. He formed a first-rate collection of Greek coins and of Egyptian scarabs, eventually writing a number of books on drawing, historical sites and scarabs. At his death his coins were donated to the Metropolitan Museum of Art, which later sold them and others through the Zurich office of Sotheby & Co. It is via this circuitous route (with another couple of hands in between) that it came to its current owner. This coin is number 440 in the ex-Ward collection.

Larissa, 400-360 BC

This drachm, struck about 50 years later, shows a similar combination of types but in a fine late-5th-Century style. On the obverse a youth wearing a chlamys with kausia flying backwards restrains an unruly bull, and on the reverse a graceful horse with head turned prances. Both sides show a movement that, for all its beauty, does not appear on the earlier coin. Rynearson writes:

The horse's head turned to the viewer is certainly the most enthralling reverse die of the series. I've never seen another, and in looking through my references, haven't found a die-match. All of the others in famous collections show the horse's head in complete profile, as he gambols. The horse's rein is loosened and falls behind the horse, almost at ground level. Note the fine musculature of the youth, and the three-dimensional quality of his cloak and hat, which has flown off his head with the wind.¹⁰



Plate IV.3T. Thessaly, Larissa, 400-360 BC. AR Drachm. Youth wearing chlamys with kausia flying backwards, restraining unruly bull running right/Horse with turned head prancing right. 6.18 g; 19mm. Jameson 1088v.; Weber 2835v.; BMC 27v. Very Nearly EF.

¹⁰ This is a coin type that doesn't really come in superb or mint state condition. Striations from strike, flan granularity and off-centeredness are usual problems with the extant specimens. As a design, it's much rarer than the Nymph's facing head series of Larissa.

Larissa, c. 322-320 BC

The facing nymph on the obverse of this striking coin is inspired by the great Syracusan die-maker Kimon at the end of the 5th Century BC. The reverse, like the other drachms, has the type of a horse, this one with its foreleg raised.

It was once thought that Larissa's coinage ended when Phillip II imposed Macedonian rule on Thessaly, which would date this drachm sometime prior to 344 BC. (In other city-states, the local coinage was replaced by Philip II's upon conquest.) However, a large hoard buried in Thessaly around 250 BC included mostly drachms minted by Alexander the Great and his immediate successors together with facing-nymph drachms of Larissa, but no coins of Philip II. The most logical explanation is that the facing-head drachm issues of Larissa were after 344 BC, not before, and were part of the currency of the early Macedonian period. It is now believed that coinage continued at Larissa up to at least 320 BC. In the Dewing Collection, the facing heads are dated by Silvia Hurter at 340-320 BC, and various articles by Cathy Lorber on the subject give 322-320 BC—just after Alexander III's death—as the probable time of the minting of this coin.

Why the coinage of Larissa continued through the reigns of Philip II and Alexander III while coinages elsewhere were replaced by the Philip and Alexander types (see Part VI, below) is a mystery. Nevertheless, Larissa was not unique in this respect. Kraay cites a few other examples of Thessalian issues that are of the Macedonian period, and there also is the curious minting of the Persian Baaltars type after Alexander's conquest of Tarsos (See Part VII, below).



Plate IV.4T. Thessaly, Larissa, c. 322-320 BC, AR Drachm (6.00 g). Nymph Larissa, head three-quarters left, wearing ampyx and earring/Horse right, foreleg raised; in field, trident head. SNG Cop 120. Herrmann pl. V, 14.

Ionia, Teos

Teos was a flourishing sea-port on the coast of present-day Turkey when the Persians, under Cyrus the Great, invaded Lydia and Ionia around 540 BC. Many inhabitants, refusing to submit to Persian rule, migrated to Thrace, where they founded the city-state of Abdera (Herodotus I, 168). Nevertheless, the prosperity of Ionia continued. Within very few years Teos initiated a silver

coinage, and at around the same time Abdera did the same. Both mints used their ancestral type of the griffin. The griffin always faces right at Teos and left at Abdera, suggesting that the two coinages somehow were connected from the start.

After the Athenians defeated Xerxes fleet at Salamis in 480 BC and up to the Athens Coinage Decree in the second half of the 5th Century BC, Teos entered the Delian League and resumed a substantial coinage on the Aeginetan standard, with the type of a griffin with raised paw and curled wings facing right to differentiate it from that of its colony. Despite the ornate obverse, the reverse of these Teos coins did not evolve beyond a stylized punch mark.



Plate IV.5T. Ionia, Teos, c. 440 BC. AR Stater (11.99 g; 22 mm). Griffin with curled wings seated right, with foreleg raised; to right, duck / Quadripartite incuse square. Balcer (SNR 47) 101. Boston MFA 1939.

Pamphylia, Aspendos

Probably the most famous athletic *tipos* ever to appear on an ancient Greek coin was the wrestler of Aspendos in Pamphylia (part of present-day Turkey). It is believed that the Aspendos wrestler series began around 420-400 BC, which would place it squarely within the classical period. Two nearby city-states, Selge and Etenna, also struck wrestler-type coins, but they started after Aspendus. However, Anthony Milavic's fascinating analysis of numismatics, art and sports casts some doubt on the claim that Aspendos was the first to strike this type. It describes what appears to be an archaic fractional (trihemiobol) coin with the wrestler motif, possibly struck in the Thraco-Macedonian region 60 years or more before the earliest Aspendos wrestler coin. That coin, consistent with archaic art, seems to have one or more bronze cauldrons between the two wrestlers. Bronze cauldrons (sometimes on tripods) are mentioned in the earliest Greek literature as prizes in athletic competitions,¹¹ and archaic vases sometimes depict cauldrons between the contestants, emphasizing the agonistic (competitive) element. New symbols of victory, including wreaths, are used during the classical period. None appear on the coinage of Aspendos.

¹¹ In the Iliad, Homer writes that a tripod and cauldron were awarded as prizes in a chariot race during the funeral games for Petroclus.

The reverse of the Aspendos coinage bears another of ancient Greece's most famous types: the slinger and the triskelion. The slinger is believed to have been chosen as a "canting" or "punning" type, because of the similarity of the ancient Greek word for slinger (*sphendone*) to the name of the town. (Other canting types are used on ancient Greek coins, for example, the rose (*rhodos*) on the coins of Rhodes and the apple (*melos*) on the coins of Melos.)

The triskeles or triskelion appears in many early cultures. It was an ancient symbol of Sicily, and it can be found on vessels from Mycenaea as well as on some of the earliest oligarchic coins of Athens (before the owls). In ancient numismatics it is best known from the coins of Aspendos and, about a century later, from the coins issued by Agathocles in Syracuse, Sicily (317-289 BC; see Coinages of Sicily in Part V, below). The origin of the triskelion on ancient Greek coins is not entirely clear. The triskelion of Sicily has been linked to the triangular form of the island, but the symbol also reminds one of the three-legged tables of Hephaestus, mentioned in the *Iliad* of Homer, which "might cause all to marvel by going with no other help to the gathering of gods and by likewise returning to his house."

Both sides of the Aspendos coins are unusual in ancient Greek numismatics for displaying detailed, full-length bodies in active athletic poses. The detail of the slinger in motion, the cords of the sling clearly visible, is particularly striking, as is the sculptural quality of the two wrestlers on the obverse.



Plate IV.6T. Pamphylia, Aspendos, c. 400-370 BC. AR Stater (10.82 g.). Two naked athletes wrestling, grasping each other by the arms / Slinger advancing right, about to discharge his sling; before, triskelion. SNG von Aulock 4541. cf. SNG Paris 53 (but this example without counter-marks). SNG Cop 192. BMC 20. Exceptional for this coin type.

Greek Island Coinages

The islands of the Aegean Sea produced a wide assortment of coins. The two most prolific coinages, from which the largest numbers of coins survive today, were Thasos in the north and Rhodes in the south.

Islands off Thrace, Thasos

East of the Chalcidice, the island of Thasos was the principal mint in the region of Thrace in the north of Greece. It had one of the most original types of any ancient Greek coin: a Satyr carrying off a nymph. On the earliest of these coins, struck during the first half of the 5th Century BC on the Babylonian standard (the same standard as the early Corinthian staters), the nymph seems to raise her hand in protest, and the style is somewhat crude and archaic:



Plate IV.7. ISLANDS off THRACE. Thasos. Circa 500-463 BC. AR Stater (9.58 gm). Satyr advancing right, carrying off protesting nymph / Quadripartite incuse square. Le Rider, *Thasiennes* 2; SNG Ashmolean 3643; SNG Copenhagen 1008. Superb EF, lightly toned, a few small die breaks on obverse. Classical Numismatic Group, Triton VIII Auction, January 11, 2005.

Towards the end of the 5th Century it is replaced by another version, clearly of classical style: the treatment of the Satyr and nymph becomes refined and harmonious. Seltman (p. 145) notes that “The rough struggle on the earlier coins has been toned down to the more polite abduction of a not unwilling nymph,” and he attributes the finer style to the direct influence of Attic art. Notice the eyes of the Satyr and nymph meeting. This later, classical type is considerably rarer than the early, archaic one, and the specimen here stands out in terms of its artistry and condition. Interestingly, the incuse punch persists throughout this coinage in Thasos, long after it has been replaced by an obverse type at most other major mints. (Other mints where the incuse persisted include those of Teos and Abdera, above.)

(From Roma Numismatics Auction 7 Lot 483: The engraving is by a superior artist and is in a very lovely style, the head of the satyr reminding us of the miniature masterpieces from Katane in Sicily depicting a satyr's head facing, while the head of the nymph here is strongly reminiscent of the head of the nymph found on the coins of nearby Neapolis in Macedon. There is no explanation in the relevant literature of the letters A, Σ, or E which sometimes appear in the obverse field of these later staters (they never appear on the earlier staters). They cannot be the signatures of the artists as the staters with the same letter often show a markedly different hand at work, so they most probably simply identify the magistrate responsible for the issue, a commonplace feature on other coinages from a number of mints during this and subsequent times.))



Plate IV.8T. Islands off Thrace, Thasos, c. 435-411 BC. AR Stater (8.64 g). Satyr advancing right, carrying protesting nymph; A to right / Quadripartite incuse square. Le Rider, *Thasiennes* 6; SNG Copenhagen Supp. 103. EF. Fine classical style. Classical Numismatic Group (CNG) Mail Bid Sale 73, September 13, 2006, Lot 110.

Like many other coinages, Thasos' autonomous coinage ended during the reigns of Philip II, Alexander the Great, and Lysimachus (after 350 BC). However, Thasos resumed issuing coins in 148 BC, after Rome's defeat of the Macedonian army at Cynoscephalae (197 BC), which marked the passing of imperial power from the successors of Alexander the Great to Rome and the closing of the Macedonian mints in 148 BC. A series of large, flat tetradrachms from Thasos became the major silver currency of Northern Greece in the 2nd and 1st Centuries BC. The first of these included coins of the finest Greek style, with the head of Dionysos wreathed with ivy on the obverse and Herakles, standing naked with a club and lion skin on the reverse. Thereafter, the type was imitated by tribes on the mainland, and the style of the Thasos coins deteriorated.



Plate IV.9T. ISLANDS OFF THRACE: Thasos. After ca. 146 BC. AR tetradrachm (16.99 gm). Head of young Dionysus right, crowned with ivy / Young Heracles standing left, laureate and nude, lion's skin draped over left forearm, resting right hand on club, ΗΡΑΚΛΕΟΥΣ ΣΩΤΗΠΟΣ downward, ΘΑΣΙΩΝ under ground line, ΔΙ in inner left field. SNG Cop. 1038. Finest Greek style. Toned grey with golden hues. Extremely fine

Islands off Caria, Rhodes

One of the major coinages of the ancient world was on the island of Rhodes, located in the eastern Aegean Sea off the coast of present-day Turkey. From ancient through Medieval times Rhodes occupied a unique political and economic place in Mediterranean history. It was a crossroads for trade, and its strategic position enabled it to prosper even during tumultuous times and become one of the greatest maritime powers of the ancient world. Rhodes had a reputation for fairness and justice; its fleets policed the eastern Mediterranean and suppressed piracy, enabling trade to flourish.

As early as the 6th Century BC, three city-states on the island issued small electrum and silver coins based on the Phoenician standard, but in around 408 BC they combined to form the new city of Rhodes, marking the beginning of one of the greatest and longest-lived coinages in the ancient world. The autonomous coinage of Rhodes even appears unaffected by the campaign of Alexander the Great. It was not until the 1st Century BC that Rhodes ceased to coin silver.

The three towns that came together to form Rhodes claimed to be descendents of Helios, the Sun-god. Thus, it is no surprise that Helios would be chosen as the obverse type for the new Rhodian coins. At the time of Rhodes' foundation, facing-head coins, inspired by the great Syracusan die-engraver Kimon, were famous in the Greek world. The head of the Sun-god appears facing outward, with a rounded face and wind-blown locks of hair, surrounded by a crown of rays. The reverse type of a rose (*ροδον* = *rhodon*), a pun on the Greek word for Rhodes, became one of the most famous types on an ancient Greek coin. Allies of Sparta, the Rhodians technically were at war with Athens, yet they modeled their ports, city plan, constitution, and even the weight standard for their earliest coins on those of Athens. However, within a couple of years the weight standard was replaced by a new standard, the Chian (also called the Rhodian), which was used in other city-states in the region including the islands of Cos, Chios, Samos and Thasos and, on the Asian mainland, from Caria (Cnidus) to Ephesus and the southeastern coast of Thrace (Aenus).

The radiate head of Helios on the coins pictured below have a sculptural quality for which Rhodian coins were famous. They were struck during the period of Rhodes' greatest prosperity (from 304-166 BC), at around the same time as the colossal bronze statue of Helios (the "Colossus of Rhodes") was erected beside the harbor of Rhodus. These coins may illustrate the style and features of that lost wonder of the ancient world.



Plate IV.10T. Islands off Caria, Rhodes, c. 240-230 BC. AR Tetradrachm (13.55 g). Radiate head of Helios facing/Rose with tendril in left field, thunderbolt. Remarkable! SNG Cop 754.



Islands off Caria, Rhodes, c. 250-229 BC. AR Didrachm (22mm, 6.56 g, 1h). Timotheos, magistrate. Radiate head of Helios facing slightly right / Rose with bud to right; to left, herm left; TIMOΔΕΟΣ above.

Crete

The oldest coins of Crete, so far as they have been identified, date to circa BC 500, while the most important period of coinage is from circa BC 400 to 300. The usual standard was the Aeginetic, the chief denominations being the stater or didrachm and drachm. After the age of Alexander the Attic standard gradually replaced the Aeginetic. It is probable that Alexandrine coins circulated in Crete.

The Cretan cities furnish many remarkable examples of fine coin engraving but also crude and barbarous reproductions, making any collection of Cretan coins a bizarre hodge-podge of styles and artistry. The types embody such distinctively Cretan myths and persons as those of Minos, the Minotaur, and the Labyrinth at Cnossus; Europa at Gortyna; Herakles, Velchanos, and Talos at Phaestus; and the local heroes of Aptera and Cydonia. Zeus is the principal god represented on Cretan coins.

This coin, struck in Gortyna on Crete around the middle of the 2nd Century, is exceptional, with a striking portrayal of Zeus' head on the obverse and, on the reverse, a male figure, perhaps Gortys, bearing a spear and shield and standing within a border of rays, which perhaps depict an arena.



Plate VII.12T. Crete, Gortyna, c. 150-120 BC. AR Drachm (3.81 g, 22 mm). Diademed head of Zeus (or Minos) left/Male figure (Gortys?) advancing to front with right hand on shield, left hand holding spear; border of rays. BMC 54 var.; Svoronos 143. A rare coin in exceptional condition. [Svoronos, *Numismatique de la Crete ancienne*, 1890. Wroth, 'Cretan Coins' in *Num. Chron.* 1884, pp. 1-58. Wroth, *Brit. Mus. Cat., Crete, &c.*, 1886.]

The autonomous Cretan issues came to an end about 67 BC when the island was conquered by Q. Caecilius Metellus. Imperial Roman coins were subsequently struck at some of the principal cities on the island.

Cyrene: Colonization and Extinction in Northern Africa

Ancient Greek city states reached southward all the way to northern Africa, where during the classical era Cyrene (in present-day Libya) had by far the most important mint. I find this city state to be one of the most fascinating

in all of ancient Greece for two reasons. First, its founding was one of the best documented instances of colonization in the ancient Greek world, chronicled by the famous historian Herodotus from Ionia who lived in the 5th Century BC and was regarded as the father of history. Second, its coinage is one of the most fascinating in the history of numismatics, depicting a species of plant that became extinct during Roman times. Cyrene may be the only instance in which a primary source of biological information about an extinct species comes from the face of a coin.

Cyrene began striking coins in the mid-6th Century, less than 100 years after it was founded by colonists from the Aegean island of Thera around 630 BC and about the same time as the beginning of coinage in Magna Graecia. A so-called “dark age” separated the time of Homer, with the great palace economies of Minos in Crete and Mycenae in the Peloponnese, from the archaic period of Greece, when city states emerged and flourished. The populations of some city states grew to the point where they could no longer be sustained by their local agricultures, and when droughts struck, they were forced to establish new colonies. Perhaps the most famous examples are the colonies established by Corinth in southern Italy and the western Peloponnese, by Achaia in southern Italy, and by Ionia in Turkey.

There is very little information about how the mother city-state went about establishing these colonies. A noteworthy exception is the famous ancient Greek historian Herodotus’ account of the creation of Cyrene. (A translation appears in Rhodes, 2007, p. 32.) After years of drought, according to Herodotus, a group of citizens from Thera visited the Oracle at Delphi, who told them they must establish a colony in Libya. They did not know where Libya was, but on Crete they found someone who did. The colonizers were chosen equitably from each Thera family. After settling an island off the Libyan coast, the colonizing party decided that it was no better off than it had been before, so it returned to Thera; however, it was not allowed off the boats. A few members of the party went back to the Oracle of Delphi, who informed them that they had not actually created a colony on the mainland of Libya so they had to go back. Eventually they established a thriving city state on fertile land on the northern slope of the Libyan plateau. Enterprising Greeks became the intermediaries between the native Libyan population of the interior and the outside world.

The mainstay of Cyrene and the *tipos* on all of its coins is the famed silphium plant, a form of *assafœtida* (related to fennel). Silphium was prized throughout the ancient world for its medicinal properties, including purportedly being a contraceptive, and for the perfumes that were extracted from it. Its heart-shaped fruit may have been the inspiration for centuries of children’s drawings and valentines, which (to many children’s surprise and confusion in their first anatomy class) have little in common with the shape of a human heart.

The silphium plant became extinct in the 3rd Century AD, and much of what we know about its appearance comes from the Cyrene coins bearing images of both the plant and its fruit. On one of the earliest Kyrene coins, the drachm from around 500 BC, the obverse shows the heart-shaped fruit of the silphium plant, and the reverse has the bearded head of Zeus Ammon with the ram's horn. (This is one of perhaps two or three such drachms in existence. The only museum collection with a drachm of this type is in the Royal Danish Museum in Copenhagen.)



Plate IV.11T. Kyrenaica, Kyrene, c. 500 BC. AR Drachm (Attic Series) (4.08 g.; 15 mm). Silphium fruit / Head right of Zeus Ammon with ram's horn within incuse. Very rare. SNG Cop 1167. cf. Rosen 763 (as hemidrachm).

A didrachm, struck nearly 200 years later around 308-300 BC, shows the youthful head of Hermes Parammon with horn of Ammon around his ear and, on the reverse, the silphium plant with three pairs of leaves. Notice the crab in the upper right field. (Barclay V. Head (p. 865) suggests that the obverse may actually be the youthful head of Aristaeos, “protector of the corn-field and vine and all growing crops and bees and flocks and shepherds and the averter of scorching blasts of the Sahara, son of Apollo and the nymph Kyrene...His cultus here appears closely allied to that of the Libyan Ammon, also a pastoral god.”)



Plate IV.12T. Kyrenaica, Kyrene, c. 308-300 BC, AR Didrachm (7.75 g; 20 mm). Head right of Hermes Parammon with horn of Ammon around his ear / Silphium plant with three pairs of leaves; in upper right field, crab; in upper left field, monogram. MBC pl. XXIV, 1 (same dies). Rose 9953 (same dies). Extra fine; artistic dies with elegant portrait of Hermes. Silphium has been extinct for

nearly 2000 years, owing to its extensive use in medicine, in cooking and in perfume.

Coins of the Peloponnese

The most famous city state in the Peloponnese, Sparta, struck no coins in the archaic and classical periods. However, several other city-states produced some of the most intriguing and artistic in the ancient Greek world.

Sicyon



SIKYONIA, Sikyon. AR Stater (Silver, 11.86 g 10), c. 370-360/40 BC. Chimaera moving to left on ground line, right front paw raised; below, over ground line, laureate head of Apollo to left. *Rev.* Dove flying left; behind tail, A/T; all within olive wreath with ties to right. BCD Peloponnesos 214 (these dies). BMC 62. SNG Lockett 2329 (these dies). Very rare. A clear and attractive piece with great images and nice toning. Extremely fine. Acquired from Edward J. Waddell 47428. Insert note on circular card: Peloponnesus, Sicyon. Same ϕ die as Egger XXXVII 26 Nov. 1909, lot 372.- J.C.-T "G" thr. exch. April 80.



Plate IV.13T. Sicyon, c. 330-280 B.C. AR Hemidrachm. Chimera crouching, underneath, ΣΙ/Dove flying. 2.83 g. SNG Cop. 57, BCD Peloponnesos 284. Acquired from Freeman and Sear, May 24, 2008.

Lokris Opunti

Opuntian Lokris consisted of a narrow slip upon the eastern coast of Greece, from the pass of [Thermopylae](#) to the mouth of the river [Cephissus](#). The Locrians, however, did not inhabit this coast continuously, but were separated

by a narrow slip of [Phocis](#), which extended to the [Euboean sea](#), and contained the Phocian seaport town of [Daphnus](#). The Locrians south of this town were named *Opuntii*, from [Opus](#), their principal city. On the west the Locrians were separated from Phocis and Boeotia by a range of mountains, extending from [Mount Oeta](#) and running parallel to the coast. The Opuntian Gulf,^[6] at the head of which stood the town of Opus, is a considerable bay, shallow at its inner extremity. The Eastern Locrians, are mentioned by Homer, who describes them as following [Ajax](#), the son of [Oileus](#), to the [Trojan War](#) in forty ships, and as inhabiting the towns of [Cynus](#), Opus, [Calliarus](#), [Besa](#), [Scarphe](#), [Augeiae](#), [Tarphe](#), and [Thronium](#).^[7] During the flourishing period of Greek history, Opus was regarded as the chief town of the Eastern Locrians. In the [Persian War](#) the Opuntian Locrians fought with [Leonidas](#) at the [Battle of Thermopylae](#), and also sent seven ships to the Greek fleet.^[9] The Locrians fought on the side of [Sparta](#) in the [Peloponnesian War](#).^[10] The Locri Opuntii also minted coins in antiquity, some of which survive.



Lokri Opuntii, c. 350 BC. AR Stater (11.96 g). Head of Demeter I. / Ajax advancing to r. with shield and short sword. On the ground a long spear and a javelin at an angle to it. Symbols inside shield: palmette with griffin.
 OPONTIΩNI. up. Corpus group 17, 133r. SNG Cop 44 (dies). Ex BCD Collection, Numismatic Ars Classica Auction 55, 8 October 2010, lot 456.5.
 Sharp, deep strike in high relief; interesting shadowing on edge of particularly appealing obverse die. Note detail and musculature of Ajax on reverse.
 Exquisite condition, nice light toning, superb.

The Olympics (Elis)

One of the most celebrated coinages in the ancient world is the Olympic coinage of Elis, a city state next to the valley of Olympia, the site of the Olympic Games. The first Olympics were held between 950 and 776 BC, many years before the advent of coinage. The very first coins were struck for the Olympic Games in the first half of the 5th Century BC. From the very start, they bore

images and allusions to Zeus, who was both “god of sky and weather” and “the lord and giver of victory.”¹²

A diversity of Olympic coins were struck. Some show the head of Zeus on the obverse and his eagle on the reverse. Many include a thunderbolt. Others display Nike, god of victory. A series of Olympian coins have the head of Hera, Zeus’ wife and sister, on one side, and the eagle within an olive wreath on the other. The coin shown below is one of the most artistic and best preserved coins from that series.

It appears that the main issues of Elean coins coincided with the Olympic Games, which took place every four years at the full moon closest to the summer solstice. At these times, Olympia—which was not a city at all—was transformed into the center of an event that drew people from all over the Greek world. Wars were put on hold to ensure that everyone had safe passage to the games. Commerce naturally would have flourished at the Olympic Games.

People would have come to the games bearing coins from their own city-states, and they would have returned home with Elean coins minted specially for the Olympic Games. Very few of these coins have been found among the ruins of Olympia. Like any valued momenta, they no doubt left along with the spectators. It is very hard to find these coins in outstanding condition, probably because they moved around so much instead of being buried on the spot as part of hoards.



Elis, AR Stater, 112th Olympiad, 332 B.C. 12.28g. 22mm. Head of Hera to right wearing triple-pendant earring, necklace of pearls, and stephane inscribed FAAEION ("Waleon"). Rv. Eagle within wreath. Seltman 347(dies). Excellent strike in high relief, highly artistic portrait of Hera, attractive toning. EF/about EF. Ex: BCD, Leu : 90, 2004, lot 162 (realized 19,500 CHF hammer price)/Ex: Hess, Zurich: 254, 1983, lot 184. Ex: Leo Hamburger, Frankfurt: 98, 1933, lot 794. Coins of this quality and artistry from Elis are extremely rare.

Argos

¹² Percy Gardner, “The Coins of Elis,” *Numismatic Chronicle* XIX: 221-73, 1879; <https://www.forumancientcoins.com/dannyjones/Greek%20Coin%20Books/The%20Coins%20of%20Elis%20-%20Gardner.pdf>



Coinages of Macedon

In the north, several Macedonian city states had flourishing mints that struck artistic and interesting coin types. Most were displaced either by Philip II or his son, Alexander the Great.

Macedon, Olynthos

Olynthos was the capital of the Chalcidic League located on the 3-fingered peninsula between Larissa (Thessaly) to the west and Thasos (Thrace) to the east. The obverse type on all denominations of the Chalcidic state was Apollo, and on the reverse of the tetrobol and larger denominations was Apollo's lyre. The whole coinage of Olynthos came abruptly to an end in 348 BC, when Philip II captured and destroyed the city-state. A number of coin hoards have been uncovered in this area, no doubt reflecting the suddenness of Philip's attack and the Olynthians' inability to return to retrieve their hidden savings hoards. The head of Apollo from this coinage became the model for Philip's coinage thereafter. It indicates that Apollo was the patron deity of Olynthos, but the remains of the Temple to Apollo in Olynthos have yet to be unearthed.



Plate IV.13T. Macedon, Olynthos. Chalkidian League, c. 400 B.C. AR Tetrobol. Laureate head right of Apollo; "gamma" below/Kithara. Reverse inscription reads XAAKIDAEQN, (Money of) the Chalcidian (League). 2.43 g. 14.3mm. SNG Oxford 2343. A glorious coin of the finest classical style.

The pictured specimen is a tetrobol, or 4-obol piece, weighing only 2.43 grams. This coin is special because of the fabulous classical style and extraordinary detail for a denomination of its size. It is artistically remarkable, certainly struck from the finest of dies from the series. The "T" under Apollo's chin could be an issue mark or an artist's signature. Tetradrachms of this type occasionally can be found, but not in as fine a style and with as much detail as this tetrobol.

A unique aspect of this particular coin is the *plektron* or pick, which musicians used to pluck the instrument's strings. It can be seen hanging, but secured, to the kithara's right lower quadrant inside the incuse square. Note each individual string wrapped around the crossbar and the artistry of Apollo's head on the obverse. This coin, about the size of a dime, is a masterpiece on a minute canvas.

Macedon, Neapolis

The Gorgon or Gorgoneion, associated with Medusa, was a fascinating mythological figure in the ancient world. The disembodied head or mask of the Gorgon was placed on shields, breastplates, and walls, just as Athena, according to mythology, placed Medusa's dismembered head on her aegis (used to mean breastplate or shield, or sometimes cloak). Homer refers to the Gorgon in both the Iliad and the Odyssey. According to myth, Medusa was once a beautiful maiden, but Athena turned her into an ugly snake-haired monster for sleeping with (or being raped by) the sea god Poseidon in Athena's temple. Men who looked at Medusa turned to stone. The Greek hero Perseus killed Medusa by cutting off her head with a harpa (sickle), finding her by using her reflection in a mirror (to avoid being turned into stone himself). From Medusa's neck sprung forth the Pegasus and the giant Chrysaor, Medusa's children by Poseidon. The disembodied head maintained its property of turning the men (but not women) who looked at it into stone.

It is little wonder that this symbol would make its way onto warriors' shields or some city-state's coinages. In fact, the Gorgon appears on at least 60 ancient Greek, Roman and Celtic coin types. The best known is that of Neapolis in Macedon. Medusa has been described as "the ugliest female visage ever to appear on the face of a coin (Goldsborough, 2004)."¹³



Plate IV.14T. Macedon, Neapolis, c. 400-360 BC. AR drachm (3.71 g; 15 mm). Gorgoneion with nose ring and protruding tongue / Laureate head right of the Parthenos. SNG ANS 429 (same dies). Kraay/Hirmer 434. SNG Cop 225 (same dies). Ex Auktion Münchhandlung Basel 8 (1937), Lot 222.

The coins of Neapolis show the Gorgon head facing front to fill the coin's flan. It displays a line of serpentine curls, a nose ring and a protruding tongue. On archaic issues (510 to 480 BC) the reverse is an incuse square. On classical coins like the one shown here the reverse bears a female head facing right, possibly Artemis. The female on the reverse of this specimen is of a particularly attractive classical style, with a beauty that contrasts with the intentionally frightening image of the Gorgon on the coin's obverse. This coin was struck from the same dies as specimens at the American Numismatic Society (die number 429) and the Royal Danish Museum in Copenhagen (die number 225).

Macedonian Tribes Before Philip and Alexander: The Orreskioi

Before the regime of Philip II, Alexander the Great's father, Macedonia consisted of several tribes. The most important of these from a numismatic point of view were the Orreskioi, the Edones, the Derrones, the Tyntenoi, the Bisaltai, and the Ichnai. The Thraco-Macedonian region had an abundance of gold and silver mines, notably in the rich mining district around Mount Pangaeos. Tribes in the region produced silver coins from about 530 to 450 B.C. Large silver octodrachms probably were struck as a store of wealth, because they would have been inconvenient for most local needs. Hoard evidence shows that they were exported to the Near East, the Levant, and Egypt.

Large-denomination silver coins of tribes in this region often shared designs. This octodrachm (or tristater) of the Orrescii, a tribe known only from its coinage, bears an obverse composition that is virtually identical to that of the

¹³ Goldsborough's article presents a fascinating account of theories concerning the origins and meaning of the Medusa image, most of them psychosexual.

same denomination coins issued by the Edones, the Ichnai and the Tyntenoi. This design shows a naked, bearded man—apparently Hermes, with cleft feet—wearing a causia and holding two spears. He leads a pair of oxen, the one in the foreground with its head lowered, the other with its head raised. The most common interpretation of this typos is of the god Hermes in the midst of stealing the cattle of the sun.



Macedonian Tribes, The Orreskioi, AR Octodrachm, c.500-480 B.C. 27.87 g. 28mm. Hermes wearing causia walking to right between two bulls; he holds two spears; ethnic inscription around / Rv. Incuse square; old cut. Extremely fine. Svoronos, pl. V, 2-3 (same obverse die). Kraay-Hirmer, 376 (same obverse die). The obverse is struck in very high relief and is exceptionally complete. Ex: Numismatic Auction, Ltd. III, New York, 1985, lot 48 (cover coin). Ex: NAC and Trad' Art. October, 2014, Ancient Coins of the JDL Collection, part II, lot 5. Published: "Coins of the Ancient World, History's Priceless Treasures," Bendenoun and De Callatay, Geneva, 2009, this coin, #12. Very rare. Appealing representation struck on a broad flan. Pleasant old cabinet tone. Superb and one of the finest known.

The Royal Macedonian Coinage of Philip II

The reign of Philip II of Macedon, father of Alexander the Great, marks a watershed in politics as well as numismatics in the ancient Greek world. Possessing prolific mines in Macedonia and Thrace (especially in the Pangaeian mountain region), Philip II issued coins in far greater quantities than any city state with the possible exception of Athens. He even had a “token” coinage of bronze, the value of which depended upon the state’s guarantee to exchange it for coins of silver or gold. These coins were struck at mints at Pella, the capital, and Amphipolis, the major trading center in the kingdom.¹⁴

The two basic types struck by Philip II are illustrated below. The gold coinage, the first truly prolific gold coinage on the Greek mainland, depicts the head of Apollo on the obverse and a charioteer driving a biga on the reverse. It is perhaps ironic that the head of Apollo is inspired by that on the coinage of

¹⁴ It is uncertain whether some were also struck at Aegae (Price, 1979).

Olynthos, which Philip II destroyed (see above). The reverse clearly was influenced by the 5th Century coinage of Syracuse (below).



Plate IV.15T. Macedonian Kings, Philip II, 359-336 B.C. AV Stater, 8.60g. 18mm. Pella mint, struck c.340-328 B.C. Laureate head of Apollo r. Rv. Charioteer driving biga r.; trident in field to r. LeRider 227ff. *Fine style and lustrous*

The silver tetradrachm has the head of Zeus on the obverse and, on the reverse, an athlete or boy riding a horse and holding a long palm branch or, on a smaller number of surviving specimens, the king on horseback, raising his right hand.



Plate IV.16T. Macedonian Kings, Philip II, 359-336 B.C. AR Tetradrachm, 14.36g. 26mm. Struck at Pella, under Antipater, Polyperchon, or Kassander, c. 323-315 B.C. Laureate head of Zeus r. Rv. Athlete riding r. holding long palm branch; Boeotian shield and serpent to r. and below. LeRider 525 (dies). Winterthur 1455 (dies). *Excellent style and unusually well detailed reverse.*

By the time Alexander the Great assumed the throne after his father's death in 336 BC, the coinage of Philip II had extinguished local coinages in the places he conquered, most notably Olynthos on the Chalkidian Peninsula. Philip II's coinage was a sort of transition coinage, evidenced by the fact that it was based on not one but two different weight standards. The gold Philippi staters, weighing 8.64 grams, used the Attic standard of Athens, whereas the most important coin of Philip II's reign, the silver stater of 14.52 grams, followed a local Macedonian standard taken over from Amphipolis and the Chalcidian League (Mørkholm, 1991, p. 41). Both continued to be struck for many years after Philip II's death. They profoundly influenced other coinages, particularly that of the Celts to the north, who struck a stylized version of the tetradrachm types.

Alexander III (“The Great”) assumed the throne upon his father’s sudden death in 336 BC, ushering in what is known as the Hellenistic period in ancient Greek history. Greek numismatics would never be the same.

Before turning to the royal coinage of Alexander III, we visit a whole other world of ancient Greek coinage that developed and evolved to the West in the former Greek colonies of southern Italy and Sicily. It is generally agreed that this is where the zenith of numismatic art was achieved in ancient Greece and, indeed, ever.

V

Coins of Southern Italy and Sicily

In the 8th Century BC, Greek city-states created colonies in southern Italy and Sicily, and these colonies maintained political and economic ties with their mother city-states. Thus, it is no wonder that as early as the late 6th Century BC, new mints would sprout up in the southern Italian states of Metapontum, Croton, Sybaris, and Caulonia, which had been colonized by Achaea on the Peloponnese, and soon after, in other states in Greek Italy and Sicily (that is, Magna Graecia, literally “Greater Greece”).

Unlike many other Greek city states, those in Magna Graecia were relatively untouched, numismatically as well as militarily, by the conquests of Alexander the Great. However, they were profoundly affected by the aggression of other city states in the region, particularly Carthage (in present-day Tunisia) and Syracuse (at the southeastern corner of Sicily), and they and their coinages succumbed to Roman expansionism earlier than did the Greek city-states to the east.

Pythagoras and the Incuse Coinages of South Italy

The coins of south Italy illustrate the leap of coinage westward. Metapontion, Sybaris, Croton, Caulonia, and Poseidonia used a remarkable technique not found elsewhere: a relief design on the obverse repeated intaglio on the reverse. The reverse “incuse” design had been used previously in Lesbos, Samos, and some other areas to the east; however, there it did not replicate the same design as on the coin’s obverse (see the Hekte from Lesbos, above).

The origin of these strange coinages has been the subject of much discussion. Without doubt the most captivating view attributes the incuse technique to Pythagoras, the philosopher and mathematician (as in the Pythagorean Theorem: $a^2 + b^2 = c^2$), who moved to southern Italy from the island of Samos right around the time these coinages began. It contends that the positive-negative idea was taken directly from the philosophy of Pythagoras

emphasizing opposites like light and dark. The juxtaposition of raised and incuse on coins was an elegant and beautiful expression of the Pythagorean duality of opposites (Seltman, p. 77).

Another explanation for the incuse method, suggested by Kraay, is simply that there was not yet any generally accepted way of minting coins, so each area had its own variations. This technique, invented in Metapontum or Sybaris, may have been adapted from repoussé work.

Practically, these coins presented some major problems of striking. Since there were two dies used (in other words, the reverse is not just a "show-through" of the obverse, like on most medieval bracteates), the dies had to be quite perfectly aligned. If they were not, the flans would crack, and the minters were back to square one. This is probably one reason why over time the flans got smaller and, more importantly, thicker, so that they would not break so easily. The incuse coinages did not last long; they were abandoned after only about a century.

Lucania, Metapontion

The Metapontum type of the barley ear, below, reflects this city-state's agricultural prosperity, being located in fertile valley and rich agricultural zone. The coin shown here is unique, being of the archaic period (c 510-470 BC) but harkening back even further to the first, most archaic, issues of the city. The earliest coins of Metapontion were struck around 550 BC, or perhaps a little later. Their flans, while weighing the same, were larger in diameter, but thinner. This is one way of dating the issues. The same dies were used to strike this specimen as one of the coins in Noe's study of Metapontum coins (die number 193).

The inscription on the reverse is in old lettering and in retrograde, like the first Greek coins bearing an inscription. Around 600 BC or a bit earlier, inscriptions were more commonly found written backwards, and many of the earliest coins of Metapontion had their inscriptions in retrograde. Die makers eventually added the dolphin, the grasshopper and the lizard as adjunct symbols (usually just one of them, never all three). This coin is believed to have been struck around 490 BC but resembles a coin that was originally struck around 520.

A fascinating feature of this coin is the ghosting of the animal symbols on the reverse, which is not mentioned in the Metapontum die studies by Noe. The dolphin swims upward on the left, with the tail at the bottom of the reverse; the salamander, or lizard, goes the opposite way, with the head being toward the bottom. The tail of the lizard is a wavy line around 3 o'clock. Rynearson speculates that this particular coin was made "somewhat as an enigma by a very fine artist who gave a *suggestion* to the owner of earlier types, like an homage. He used the old forms of the letters in the inscription and

hoped that someone who owned the coin would someday realize the connection, and agree with the later Latin saying *MVLTVM IN PARVO*.” Another possibility is simply that the die was modified by removing the animal symbols, leaving the ghost images. However, Rynearson does not believe that this coin was overstruck or used dies from an earlier period.

The old forms of the letters conform to the early forms of Greek letters illustrated in Barclay Head’s *Historia Numorum* (Table II). They have a different angle than the letters on later coins, as well as not-straight barring (for example, see the epsilon (E) on this coin). It is usual for coins of c. 500 BC to have inscriptions in the later Greek lettering.



Plate V.1T. Lucania, Metapontion. Circa 510-470 BC. AR Nomos (8.11 g, 12h). (Rev.) META on right, six-grained ear / Incuse eight-grained ear. Noe 193 (same dies); HN Italy 1482. EF. From CNG Auction 72, June 14, 2006 (lot 90).

This later coin of Metapontum abandons the incuse method and now has a lovely portrait of Persephone on the obverse while retaining the barley ear on the reverse:



Lucania, Metapontion. 350-330 BC. AR Stater (7.92 g). Helmeted head right of Leukippos, head of lion behind / Ear of grain. SNG ANS 440 (same die), Boston MFA 116. Lustrous with remarkable detail on both obverse and reverse.

Lucania, Sybaris

The coin of Sybaris depicts a bull whose head is gracefully turned backwards, in relief on the obverse and incuse on the reverse. Its type is one of the most artistic on the coins of Southern Italy and, indeed, elsewhere in the Greek world. The Sybaris elite were renowned for their indulgences, giving root to the modern word “sybarite.” It was said that Sybarite chefs were able to patent their recipes, and the games hosted by this city state were more elaborate than those of Olympia. There was an uprising in 510 B.C., squelched by the elite. Rebels took refuge in nearby Croton (which also used the incuse technique for its coins representing the tripod of Apollo at Delphi; see below). Sybaris demanded their extradition. When Croton refused, Sybaris attacked Croton. Although vastly outnumbered by the Sybarite forces, Croton managed to repel the attack and destroyed Sybaris. To prevent Sybaris from ever being resettled, it then diverted the Crathis River to pass through the center of the old city. Because of this, remnants of the center of Sybaris have never been uncovered, and coins are among the few surviving artifacts of this fascinating city-state.

This is a relatively easy coin to date, falling as it must between the beginning of Southern Italian coinage at around 550 BC and the destruction of Sybaris in 510 BC.



Plate V.2T. Lucania, Sybaris, c. 520 BC. AR Stater (8.18 g; 28 mm). Bull with head reverted standing left; dotted cable border / Bull with head reverted standing right, incuse; rayed border. SNG ANS 838. Dewing 406. Basel 169.

Lucania, Thourioi

When the descendants of the survivors of Sybaris attempted to create a new settlement near the site of the deserted city in 443 BC, 70 years after Sybaris' fall, Kroton opposed. An appeal for help from Athens was answered by Pericles' organization of a Panhellenic foundation that sent colonists from various parts of Greece to settle the new city, named for the nearby fountain of Thuria. Athens provided them with both financing and a naval escort. Among the Athenian citizens who took part in the settlement of Thurium (also called Thourioi or Thuri) were Herodotus the historian and Lysias the orator. The form of government was democratic, and the city itself was laid out with great

regularity, being divided by four broad streets or plateae, each of which was crossed in like manner by three others. (Diod. xii. 10.)

Almost immediately after its inception Thurium began striking coins. During the city's period of greatest prosperity starting in 425 BC, the coins of Thurium rank among the finest in the Greek world in terms of delicacy of style and execution, testimony to the prosperity and opulence of the city. On their obverse is the head of Athena, her helmet adorned with a splendid figure of the sea-monster Scylla (or occasionally a hippocamp or griffin). On the reverse is a bull rushing with foreleg curled and head bowed. The rushing bull has been interpreted as symbolizing the fountain from which the city got its name, the river Krathis, or simply a further development of the bull on the coins of Thurium's predecessor, Sybaris. Rome declared war on Thurium in 282 BC, after which this city-state became a dependent Roman ally. The exact location of the Greek Thurii is still unknown.



Plate V.3T. Lucania, Thourioi, c. 400-380 BC, AR Triobol. Head right of Athena wearing helmet adorned with Skylla / Bull butting right; in exergue, fish. 1.10 g; 12.5 mm. SNG Lockett 525. SNG ANS 1139. Dewing 447. Rare and in exceptional condition; certainly one of the finest known.

Bruttium, Caulonia



Caulonia, 530-475 BC. AR Stater, 8.23g. 30mm. Apollo advancing to right holding branch in right hand and small *daimon* figure on outstretched left arm who carries two branches; stag in field to right. Rv. Incuse image to left of the obverse. Noe 1 (dies). Hirmer/Kraay 259. Lovely old cabinet toning. Ex: Bank Leu, Zurich, Auction 25: 1980, lot 39 (sold for 26,000 Swiss Francs and was purchased by Spink in 1980). Extremely fine and one of the best in existence.

Bruttium, Croton

The quintessential tipos of Croton, Sybaris' nemesis founded in the late 8th century by a colony of Achaeans, was the tripod, here accompanied by a crane. Croton was home to the Samian philosopher Pythagoras, who around 535 BC, in the wake of a military defeat at the hands of the Locrians, was given dictatorial powers. Pythagoras' brotherhoods were founded in other Italiote

cities, as well. The intaglio of the tripod appears on the reverse of the coins of Croton.



Plate V.4T. Bruttium, Croton. c.480-430 B.C. Archaic AR Stater (8.01g., 22mm.). Tripod with lion's feet; stork to l.; ethnic inscription to r. Rv. Tripod incuse. SNG ANS 259. Acquired from Edward J. Waddell, Ltd., SF Historical Bourse, May 26, 2007.

What Do You Do with an Illegitimate Spartan?

Mary Ebbott recounts the multiple versions of the story of the Partheniai of Sparta, the children born while the Spartans were away fighting the long first Messenian War of 750-735 B.C. In some versions, there was a group of men who did not go to war because they were cowards or because they were too young at the start of the war. In some way they were distinct from the main group of Spartan citizens, who had sworn an oath not to return home until Messenia was conquered. In one version of the narrative (that of Ephorus) the Spartan women complain that there will not be a new generation of Spartans because the men have been away for so long, and in the mean time the enemy was still producing children. The younger men, who had recently joined the fighting and not taken the oath, thus are sent back to sire a new generation. In all versions, the Partheniai are later denied political rights and stage a revolt because of their unequal status.

The solution to this crisis is to expel the Partheniai from Sparta to colonize Taras (also called Tarentum) in Calabria in southern Italy, under the leadership of Phalanthus and Taras. In one version (that of Antiochus), the oracle at Delphi tells Phalanthus to found a colony at Taras. A legend tells of Taras being saved from a shipwreck by the sea-god Poseidon, who sends a dolphin to carry him ashore.

Sparta did not use or strike coins. However, the new city-state of Taras quickly learned the art of coin-making from neighboring city-states in southern Italy. It briefly experimented with the incuse technique and then issued a prolific coinage of silver drachms and didrachms (not tetradrachms) right up to its conquest by Rome in 272 BC. Gardner writes: "Tarentum became a city of shipping and cavalry, so on one side of her coins Taras rides his dolphin, and on the other Phalanthus mounts his steed, repeating age after age the exploits by

which they were supposed to have won fame, and furnishing a constant model to the ambitious youth of Tarentum.” (P. Gardner, *Countries and Cities in Ancient Art*, J.H.S. ix p. 55; cited in Cook, 1903, p. 518)

The coinage of Taras from 450 to 228 BC (when it was displaced by Roman coins) is the most prolific of all the Greek cities of Italy. Many coins have survived, and examples can be found at most major ancient Greek coin auctions. The quality of artistry inherent in the coin pictured here has led some numismatists to believe that the artist himself placed his initial "K" in the left field of the obverse.



Plate V.5T. Calabria, Taras, 334-330 BC. AR Didrachm (7.91 g). Horseman right holding lance and shield; below horse, “ΣΑ”/Taras on dolphin left, holding ornamented trident; below, dolphin left; “Κ” in left field (possibly the artist’s initial). Vlasto 607, SNG ANS 997. Of particularly fine style, as evidenced by the facial detail and the musculature of the boy Taras.

The River-God of Neapolis

Neapolis, meaning new city (not to be confused with the Neapolis of Macedon), was located where the modern city of Naples, Italy, now stands. Little is known about its history, other than that it was built by inhabitants of the nearby Greek colony of Cumae, which in turn was founded in the 8th Century BC by people from Euboea, Greece. Its founding may have something to do with the fact that, at the time, the Cumaeans were holding off invasion attempts from the Etruscans, from the north.

The reverse of this coin depicts one of the POTAMOI (rotami), gods of the rivers and streams of the earth, who were sons of the great earth-encircling river Okeanos. Their sisters were the Okeanides, goddesses of streams, clouds and rain, and their daughters were the Naiades, nymphs of fresh-water springs. The River-God is depicted as a man-headed bull, as on this amphora with a Naiad Nymph.



River-God & Naiad Nymph, Campanian red-figure amphora C4th B.C., British Museum



CAMPANIA, Neapolis, 350-330 BC. AR Stater (7.37 g.). Diademed head of nymph right / Man-headed bull walking right; above, Nike flying right, placing wreath on bull's head; N below bull. Sambon 366; HN Italy 565; SNG Ashmolean 89 (same dies). Wonderful artistry.

The Nemean Lion of Rhegion

Rhegion (modern day Reggio) is located right on the toe of Italy, within eyesight of Sicily on the Strait of Messina. It has a deep history of ties with Sicily, particularly the city-state of Messana (also called Zancle; see below). While tyrant of Rhegium, in 494 BC Anaxilas encouraged fugitives from the island of Samos to seize [Zancle](#), after which he besieged the city himself. It is not surprising, then, that coins of Rhegion would feature the facing head of the Nemean lion, the same as Samos. Rhegion allied with [Athens](#) during the [Peloponnesian War](#) and continued to be Athens' ally until 387 BC, when it was taken by Syracuse. The photo below shows a particularly fine and artistic example of the facing-lion coin of Rhegion.



BRUTTIUM, Rhegium. Circa 415/0-387 BC. AR Tetradrachm (23mm, 17.20 g, 1h). Facing lion's head / Head of Apollo right, wearing laurel wreath; olive sprig behind. Herzfelder 88 (D54/R75); HN Italy 2496; Gulbenkian 141 (same obv. die); Bement 316 (same obv. die). Rare die pairing, only one example noted in Herzfelder. Ex CNG 85, Lot: 170, July 28, 2010. Artistic and struck in high relief on excellent metal.

Coinages of Sicily

The coinages of Sicily in the second half of the 5th Century BC are widely considered to be among the most beautiful ever minted. City-states all around the island had their own mints and *tipos*, yet coins were struck on a uniform (Attic) standard and seem to have been accepted in trade throughout the island. One by one, all of the major coinages of Sicily disappeared as city states were conquered by one another (especially by Syracuse), by Carthage (on the western half of the island), and ultimately by Rome.

A common theme on the obverse of many Sicilian coinages is the quadriga (chariot) driven by a charioteer, sometimes male, other times female. It is believed to have been inspired by the fame won by tyrants and aristocrats of Sicily in the chariot races at the Olympic Games. In Pindar's *Olympic Odes*, all six chariot races are won by Sicilians, and Aristotle wrote that Anaxilaus, tyrant of Rhegium and later Messana, recorded his Olympic victories on his coins with the mule car. Sometimes, Nike, goddess of Victory, is seen placing a wreath on the horses' heads. The reverse types feature an extraordinary assortment of gods, goddesses, nymphs and animals. Some of the best examples of these motifs are the coins of Katane (present-day Catania), Messana, Syracuse, Himera and Selinus.

Sicily, Katane

The Katane tetradrachm is representative of the early Greek classical style, with an artistic rendering of the head of Apollo wearing a laurel wreath on the reverse and, on the obverse, the quadriga driven by a female charioteer, with Nike flying overhead, crown in hand. Katane was a leader in numismatic artistry at this time. Soon after this coin was issued, it became among the first to mint facing-head coins, including a series of Apollo by the famous die-maker Herakleidas (with signed dies).



Plate V.6T. Sicily, Katane, c. 450-425 BC. AR Tetradrachm. Quadriga right being driven by charioteer; above, Nike flying right crowning horses with the nearest horse turning head to viewer/Laureate head right of Apollo. 17.55 g (certainly one of the heaviest examples known, and of very good silver); 25.5mm. SNG ANS 1249 [these dies]; Rizzo plate XI, 4 [this obverse die]. This coin probably is attractive VF with the usual edge flaws as common with this issue; exceptional style and highly representative of early Greek Classical style. Very rare.

Sicily, Messana

Messana was originally called Zancle, a native word meaning sickle, for the sickle-shaped bar of sand that enclosed its port. It was one of the very earliest Chalcidian settlements on the island of Sicily. (Chalkidiki is a large peninsula in northern Greece that resembles a hand with three fingers.) In the early 5th Century BC it briefly experimented with the incuse method practiced in southern Italy. The tyrant Anaxilas caused Zancle to be treacherously seized by a body of Samians and Milesians sometime after taking power in Rhegium, across the strait on mainland Italy, in 494 BC. It appears that at this time he colonized the city with Messenians (from the southwestern part of the Peloponnese) and named it Messene. For the next couple of decades, coins of Messana depicted the facing head of a lion, a type found at Samos. However, around 480 BC Anaxilas introduced both at Messana and Rhegium a new type that would become one of the most famous of ancient Greece: the mule car on the obverse and the hare on the reverse. Aristotle wrote:

*“Sicily was without hares until the time of Anaxilas of Rhegium, but he imported and preserved them, and, as about the same time he won a victory at Olympia with his mule-car, he placed on the Rhegine coins the types of a mule-car and a hare.”*¹⁵

The reverse type of the leaping hare is unique to Messana and Rhegium. Jenkins (p. 91) attributes it to being the animal of Pan, who appears underneath the hare on some specimens. This one, however, has a rarer type of the hare and

¹⁵ Pollux, Onom. V, 75.

fly. Kray (214) suggests that the hare may refer to a cult, associated with Pan, brought to Messana under Anaxilas. Whatever its origin, it seems that the Messanians associated the hare with the worship of their god Pan, as it continued to be struck long after the tyrant's death. After the expulsion of the tyrant around 461 BC, Messana continued at first to strike with the old types, but the male charioteer was replaced by the city-goddess Messana. In 396 BC Carthage utterly destroyed Messana, putting an end to the coinage of the biga and the hare.



Plate V.7T. Sicily, Messana. , c. 420-413 BC. AR Tetradrachm. Biga of mules driven left by female charioteer; in exergue, two dolphins meeting/Hare bounding right; beneath, fly. 17.35 g. Caltabiano 516 (these dies), SNG ANS 373 (these dies), Jameson 650 (these dies). This superbly executed reverse die exhibits the diagnostic die break beneath the hare as mentioned in the die study by M. Caltabiano, AMUGS XIII.

Sicily, Akragas

Akragas, Roman Agrigentum, was situated close to the southern coastline of Sicily midway between Gela and Selinos. Founded by colonists from Gela circa 580 BC, Akragas grew to become the second most important city on the island after Syracuse, deriving much of its wealth from the export of agricultural produce to Carthage which lay about 200 miles to the west. Its coinage commenced in the closing years of the 6th century and consisted in the main of silver didrachms down to about 472 BC, after which the tetradrachm became the principal denomination. The types down to circa 420 comprised a stationary eagle on the obverse and a crab on the reverse, presumably symbolic of land and sea. Thereafter, the designs became more complex with one or two eagles shown devouring a hare and a galloping quadriga ultimately replacing the crab. In the final decade of the 5th century, Akragas suffered the same fate as many of the other Greek cities of Sicily when it was stormed and sacked by the invading Carthaginians (406 BC).



Sicily, Akragas, 465-446 BC. AR tetradrachm (24mm, 17.53 g, 4h). Sea eagle standing left; AKRAC ANTOΣ (partially retrograde) around / Crab within shallow incuse circle. Lee Group I; SNG ANS 979-80 (same obv. die); SNG Lloyd 803; Rizzo pl. I, 8; Basel –; Gulbenkian 162; HGC 2, 77. EF, toned, die flaw off image on reverse. Well centered, with exceptional detail on excellent metal; one of the finest that have become available in recent years. Note the sharpness of the eagle's head and crab's eyes and claws.

Sicily, Himera

Himera, on the north coast of Sicily, was founded around 650 BC by settlers from Zankle (later known as Messina; see above). Its first coins were struck on the Aeginetan standard, no doubt reflecting strong commercial connections with Aegina. They had the device of a rooster on the obverse with an incuse square on the reverse. It switched to the Attic standard in 480 BC, after Theron of Akragas (also known as Agrigentum) occupied Himera, and in that year, with the help of Gelon, gained a great victory over the Carthaginians, who had blockaded him in the town. Theron occupied Himera and imposed a coinage with the *tipos* of the crab of Akragas on the reverse, maintaining the rooster on the obverse, starting around 482 BC.



Sicily, Himera, 483-472 BC. AR Nomos. Rooster standing right / Crab in shallow incuse. Extraordinary condition; note the sharpness of the rooster's head. Very rare; one of the finest specimens known.

In 470 B.C., Himera came under Syracusan influence. A new coinage of tetradrachms followed. This silver tetradrachm of Himera, struck between 440 and 425 BC, has the common Sicilian obverse *tipos* of the quadriga driven by a

charioteer who is being crowned by Nike flying overhead. (Compare it to the obverse of the tetradrachms from Katane and Messana, above.) The reverse presents a scene as though in a painting. Himera, the nymph, holds her patera over the altar, while to the right a satyr bathes in a fountain of water emanating from a spout in the form of a lion's head, delicately poised with his left hand against the fountain and his head tilted back to let the water strike his chest. There is a grain above and a fish below. The satyr bathing under the lion-head spout probably refers to the warm springs near Himera. Himera, in the clinging drapery typical of late fifth-century sculpture, holds a *phiale* or offering bowl in her right hand and makes a gesture of prayer or sacrifice with the left.

A few specimens of this coin have survived, but the obverse of this one, in nearly mint state, reveals the artistry of the die-makers hand. Even the hairs on the satyr's tail, the streams of water from the fountain, and the libations falling upon the altar are visible on this remarkable miniature canvas. That a rusty die was used for the obverse of this and many other Sicilian coins suggests both the relative importance attached to the obverse type in these city-states and the significant investment that carving a new die represented.

Carthage destroyed Himera in 409 BC, and Himera's coinage came to an end.



Plate V.8T. SICILY, HIMERA, c. 440-425 BC. AR Tetradrachm. Charioteer driving walking quadriga right; Nike flying left above, crowning charioteer/The nymph Himera holding patera over altar; to right, satyr bathing in a fountain beneath a lion-headed spout; in upper right field, grain; fish in exergue. 17.25 g; 27.5mm; 11 h. SNG Lloyd 1021; SNG ANS 167 (this obv. die); Rizzo pl. XXI, 22 (this obv. die). Normal rusty obverse die; otherwise lustrous and Nearly Mint State. Acquired from Paul Ryneearson.

Sicily, Selinus

The coinage of one other Sicilian city state, Silenus, had the same kind of painting quality found on Himera coins. Selinus was located near the southwest corner of Sicily, across the island from Himera. Its name was derived from the wild parsley (σίλινοϛ, selinos) which grew there, and the leaf of this plant was adopted as the symbol of its earliest coins.

Around the same time that Himera initiated its new coinage, Selinus began minting coins with a remarkably similar motif. The obverse shows a quadriga driven by Artemis. Beside her stands Apollo drawing his bow. On the reverse, the river god Selinus stands in a pose similar to that of the nymph on Himera's coin, offering a sacrifice over a lighted altar and holding a branch in his left hand. This coin does not have quite the depth of field of the Himera one, but the figure of Selinus has a classical grace, his weight over his left leg placed slightly forward. On some specimens (including the one pictured below), faint drops of wine can be seen falling onto the fire. At the base of the altar stands a cock, and to the right is the selinus leaf above a statue of a bull on a pedestal.

Selinus' location made it particularly vulnerable to Carthage, which conquered this city state in 409 BC, the same year Carthage destroyed Himera. That is the last year in which this coin might have been struck.



SICILY, SELINUS, c. 455-409 BC. AR Tetradrachm. Slow quadriga right, driven by Artemis, beside her Apollo drawing bow, barley grain in exergue / ΣΕΛΙΝΟΝΤΙ— ON, river god Selinus standing facing on slightly rough ground, head left, right hand holding phiale from which he offers sacrifice over lighted altar, left hand holding branch over shoulder, cock left on base of altar, in right field selinus leaf above statue of bull left on pedestal. 17.07 g; SNG ANS 697 (this die); Schwabacher 23 (this die). Excellent artistic example of this rare coin. Acquired from Edward J. Waddell, Ltd., 5/22/2009.

Sicily, Syracuse

The classical-period Syracusan tetradrachms all bear the head of Arethusa, the fountain nymph of Syracuse, surrounded by a ring of dolphins on the obverse, and the quadriga on the reverse. In the second half of the 5th

Century BC, the diemakers of Syracuse became famous throughout the Greek world for their skill and artistry—in particular, their exquisite depictions of Arethusa, which curiously appears on the reverse, not the obverse, of these coins. The example below is a particularly fine and artistic one from around 430 BC, struck from a die carved by an extraordinarily talented, but anonymous, engraver.



SICILY, SYRACUSE, C. 430 BC. AR Tetradrachm, 17.20g. 26mm. Bearded charioteer wearing chiton and driving a walking quadriga to right; he holds reins in left hand and reins and goad in right hand; Nike is flying above and crowning the lead horse with a wreath; laurel branch in exergue. Rev. Head of Arethusa to right; hair in sakkos with ties on crown of head; two decorative bands of a meander and a zig zag pattern on sakkos; olive branch on ampyx; she wears a hook-earring and necklace with amulet; four dolphins and ethnic inscription around. Rizzo, *Monete Greche Della Sicilia*, 1946, plate 40,2 (this coin). Boehringer 654 (dies). The head of Arethusa is of exquisite style and struck in high relief. This is a masterpiece produced by a distinguished, but anonymous engraver, just prior to the period of the signed dies from Syracuse. This coin exhibits lovely old cabinet toning and is one of the finest known examples of the type. Ex: *Munzen und Medaillen*, Basel, Auction 53, 1977, lot 36 and with an enlargement on plate 22. Ex: *Numismatica Ars Classica*, Zurich, Auction 8, 1995, lot 158. This particular coin was published in Rizzo, pl. 40,32.

At the end of the century the great masters of die-making appear—engravers so distinguished that they actually signed (carved their names into) their dies, so that their names appear on every coin struck. The horses come to life with a sense of movement never seen before, chariots sometimes are precariously balanced on one wheel as they round the turn, and Arethusa is depicted with a diversity of elaborate hair-dos that would be the envy of Hollywood glitterati. These engravers, by signing their dies, have become immortalized in the coins that survived the millennia. A striking example shown here is a tetradrachm signed by one of the most famous of ancient die-makers, Eumenos. Nothing is known of the die-maker's life; he lives on only through his signatures on these coins.

In his 1913 study of Syracusan tetradrachms from the period of signed dies, Lauri Tudeer commenced with the group of Sosion and Eumenos, to which this coin belongs. This first group shows a high-action chariot in profile and an elegant portrait of Artemis-Arethusa with her hair bundled at the back of her head. The subsequent group continues the profile chariot, yet changes the image of the goddess with the addition of loose curls at the extremities of her coiffure. Tudeer's first group has four obverse and six reverse dies; the obverses are all unsigned, but half of the reverses bear signatures at the top of the Arethusa's ampyx – one for Sosion and two for Eumenos. It is a tight-knit group, and even if the work of at least two artists is represented, the die linking leaves no doubt that they were contemporaries. The unprecedented use of signatures and a fresh artistic approach show that this was a time of innovation at the mint of Syracuse, and suggests that the egos of the artists were at odds. In this initial period Sosion and Eumenos worked with an identical design format, making the quality of engraving the only method of distinction. Both excelled, and were it not for the presence of their signatures, their works might essentially be inseparable. For reasons unknown, Sosion produced no other signed dies and Eumenos appears to have eclipsed him at the mint until he, in turn, was overtaken by later contemporaries, such as Eucleidas and Euainetos.



Plate V.9. Sicily, Syracuse, c. 415 BC. AR Tetradrachm signed by Eumenos. Fast quadriga driven l. by clean-shaven charioteer, wearing long chiton, leaning forward to restrain horses while holding kentron and reins, above, Nike flying right crowns the charioteer with a wreath. Rev. Head of Arethusa left wearing hook earring and necklace; a broad ampyx is inscribed "EVMENOV" above two parallel rows of wavy hair; her hair is bundled on the back of her head with two loose locks cascading on her neck; four dolphins and ethnic inscription around. 17.10 g. Rizzo pl. XLII, 4 (these dies). Hill, "L'Art Dan Les Monnaies Grecques," pl. 24,2=British Museum example; Kunstfreunde 114 (dies); Jameson 788 (this reverse die); Boston 399 (these dies). AMB 456 (these dies). Tudeer 7. One of the rarest of the signed tetradrachms; possibly the finest specimen known. Well struck in high relief on a full flan with a delightful light tone, good extremely fine. Ex Numismatica Ars Classica 52, Lot 74, 7 October 2009.

For this coin Eumenos decided to present Arethusa as a sophisticated young woman with her hair bundled on the back of her head with two loose locks cascading down her neck. Her hair is held back in the front by an ampyx, or headband, on which the artist's name is inscribed. The incredible detail, artistry, and enduring beauty of late 5th Century Syracuse coins make them among the most sought after of all Greek coins.

The coinage of Syracuse changed abruptly around 400 BC. The only remaining major mints were those of Syracuse, in the eastern part of the island, and the Siculo-Punic mints, in the Carthage-occupied western part. The tetradrachm series came to an end. Syracuse's coinage shifted to two denominations of gold and silver decadrachms for the payment of mercenaries under Dionysius I (405 to 367 BC). No new coinage was minted under Dionysius II (367 to 357 and 346 to 344 BC); hoard evidence suggests that old coins, including tetradrachms from the 5th Century, remained in circulation for a long time. Kraay writes of decline on the island outside of Syracuse: "Many cities were largely abandoned and game was being hunted in their suburbs." This period is considered a hiatus in Syracusan coinage.

The liberator Timoleon landed in Sicily in 344 and initiated a new coinage, modeled on the Corinthian silver stater with the Pegasus (a didrachm), to replace the tetradrachms. The choice of this type clearly reflects Syracuse's colonial ties with Corinth, which originally settled this city state and aided Timoleon in coming to power. Timoleon also issued bronze coins, including this half-drachm with Zeus (obv.) and the thunderbolt and eagle (rev.). This coinage continued until the reign of Agathocles from 317-289 BC.



Plate V.11T. Syracuse, Timoleon and the Third Democracy, 344-317 BC. AE Hemidrachm (14.43 g, 5h). Timoleontic Symmachy coinage, circa 344-339/8 BC. Laureate head of Zeus Eleutherios right / Thunderbolt; to right, eagle standing right. Castrizio series I, 1γ; CNS 72; SNG ANS 477. Good VF, wonderful dark green patina. Classical Numismatic Group (CNG) Mail Bid Sale 73, September 13, 2006. All this type are struck on thick flans; this one is around 3mm, not counting the relief of the design. Note the two casting spurs. The flans for the bronze coinage of Sicily and a great many cities of Magna Graecia were first cast in molds, then individually struck between dies. Many silver coins of Sicily were produced in the same manner.

Agathokles (317-289 BC) set out to revive the greatness of 5th Century Syracuse, and this included its coins. The Agathokles tetradrachms, like those of 5th Century Syracuse, depict the head of the nymph Arethusa, here wearing an elaborate hair-do reminiscent of those fashioned by the masters, and the galloping quadriga. The charioteer leans forward with his whip as the galloping horses lurch forward. The triskelion (circle of three running legs, also called the triskeles) is an ancient symbol appearing on coins as early as the oligarchic (pre-owl) issues of Athens in the 6th Century BC. It appears on all of the tetradrachms issued under Agathokles.

It is clear that the die-maker took great effort to represent the artistic advances of the master die-makers of nearly a century earlier, including the artistic rendering of the nymph and the sense of movement in the chariot scene. It also reflects technical advances. Coins were still cut from hand-made dies, carved by artists. However, these lack the unique artistry of the 5th Century Syracuse coins and have a slightly less artisanal look, a hint of movement towards the more uniform coinages that

would emerge under the Roman empire and after. It seems fitting that Sicily would provide us with such a glimpse into the future not long before its coinage was finally extinguished as it fell to the Romans in 212 BC.



Plate V.12T. Agathokles, 317 - 289 v. Chr. Tetradrachme, (16,46 g), c. 310 - 305 BC. Head of Arethusa surrounded by ring of dolphins / Quadriga, above, triskelion. Monogram AI. M. Ierardi, *Tetradrachms of Agathokles of Syracuse*, *AJN N.S.* 7-8, 1995 - 1996, 41. Gorny & Mosch Auction 151, Monday, 09. October 2006 Ancient Coins / High quality, No. 93. vz

Sicily, Leontini

Leontini was settled by colonists from the Chalcidian Peninsula toward the end of the 8th Century BC. It was an inland city-state, situated 20 miles northwest of Syracuse on the island of Sicily. According to Head, its first issues were tetradrachms struck on the Attic weight standard between 500 and 466 BC. It passed under the dominion of the tyrant Gelon and then Hieron, regaining its independence in 466 BC and, like other Sicilian city states, enjoying a period of prosperity thereafter. Under Gelon, the obverse type was that of Nike over the quadriga as at Gela and Syracuse. Significantly, Leontini abandons the quadriga after it is free of the tyrants. Between c. 466 and 422 BC the obverse becomes an increasingly fine classical portrait of Apollo.

The quintessential reverse type of Leontini is the Lion's head with open jaws. It is surrounded by four corn-grains, or three only, the fourth replaced here by a laurel-leaf. (Compare this ring of corn-grains with the ring of dolphins on the tetradrachms and decadrachms of Syracuse.) The choice of Apollo for the obverse reflects the reverence with which Apollo was worshipped at Leontini, while the lion, Apollo's emblem, is also likely to be an allusion to the city-states' name.

In 427 BC Leontini became embroiled in a struggle with the powerful Syracuse, to which it was reduced to a state of dependency in 422 BC. Soon after, its famous *tipos* of the lion with open jaws disappears.



Plate V.14T. SICILY. Leontini. Ca. 430 BC. Silver tetradrachm (17.54 gm). Laureate head of Apollo left / LEO—N—TI—NON, head of roaring lion left, laurel leaf behind, three barley grains around. Boehringer, *Studies Price*, pl. 12, 55 (same dies). SNG ANS 257 (same dies). SNG Oxford 1797 (same dies). Absolutely mint state.

Bronze Coinages of Sicily

The most celebrated of Sicilian coins are silver, but the island's city-states also boasted a prolific and artistic bronze coinage. As early as the late 5th Century BC, city states in Sicily had invented the idea of fiat money, that is, the minting of coins with values greater than that of the metals they contained. This solved the problem of coins struck from precious metal being too valuable to be of practical use (unless they were very small, like the tiny silver Athenian one that was mistaken for a fish scale in Aristophanes' play). It also avoided the unwieldiness of very heavy bronze and other non-precious metal coins struck to be worth their weight in less expensive metal.

Syracuse is credited with inventing the bronze fiat or token coinage, by guaranteeing to exchange bronze coins for their stated value in silver at any time. This hemilitron (equivalent in value to half an *obol* or one twelfth of a *drachm*) is of exquisite style and neatly illustrates the way in which many Sicilian coins of the period were made: a line of flans was poured of molten bronze, then separated. When cooled, the planchets were then struck with the dies. This small bronze coin has its casting spur still intact.



Plate V.10T. Sicily, Syracuse, 405-400 BC. AE Hemilitron, reduced standard. Head left of Arethusa/Ethnic and two dolphins in a wheel of four spokes. Casting spur intact! Exceptional. Risso pl. xlvii, 9. SNG ANS 405. Sammlung Ludwig/Basel 493.

In contrast to the other Greek city-states, silver tetradrachms of Sicily were also manufactured in this way (but not as tale-worthy as on this bronze example; notice the remnants of casting spurs on the Katane tetradrachm shown earlier). The bronze hemilitron above was struck during the period of highest style, during the same few years that the greatest silver coins were minted, 405-400 BC. This is illustrated by the finesse and detail, especially in the hair. The reverse type is imaginative. On it the wheel of four spokes hearkens to archaic obols/litras of Syracuse. The placement of the dolphins diving into the water in the lower two quadrants is artistic. The spokes of the wheel end in lily-like terminations, which extend around the coin's perimeter. Light concentric circles have been added in the die to add depth to the design and to further the connection to the spokes of a charioteer's quadriga, which is the type used on the tetradrachms. The reverse is boldly struck. This coin's patina is green with a slight bluish tint. The volcanic soil of Sicily often imbues bronze coins with this "wheel of color."

At around the same time, the extraordinary bronze coin below was struck at the Sicilian city state of Nakona. The site of Nakona has never been found, but its coinage, which was entirely in bronze, persists. The specimen pictured below, struck between 420 and 410 BC, shows Silenos seated on a donkey and holding a jug on the obverse, and on the reverse, one of the most unique and artistic portraits in Greek coinage: the nymph of the city. Bronze coins in this condition are rare, because these were local currencies, heavily used, and not as enduring as silver and gold—the latter being more likely to be kept undisturbed as part of a family's wealth.



Plate V.15T. SICILY, NAKONA, Before 400 BC. AE 18 (Tetras). Silenos, holding thyrsos and kantharos, seated on donkey to left/Head right of nymph. 3.23 g; 18mm; 7 h. Calciati I, p. 325, 1; SNG ANS 512; Rizzo pl. 60, 10.10a; SNG Cop (Acquisitions) 71. Very rare. Brown patina; Superb.

Later on, Agathokles' coinage would include a remarkable diversity of issues in silver and gold as well as bronze. The specimen below is a premium example of a bronze litra struck in Syracuse during Agathokles' reign in the late 4th or early 3rd Century BC.



Plate V.13T. SICILY, SYRACUSE, AGATHOKLES, 317-289 BC. AE 22.
 Bust right of Artemis Soteira, quiver at shoulder/Winged thunderbolt. 9.00 g;
 4:30 h. Calciati II, p. 277, 142; SNG ANS 708-731; BMC 422. Extremely well-
 defined with every strand of hair sharp; rich brown and green hues from Sicily's
 volcanic soils. Superb.

West of Syracuse, perched on Sicily's south coast, was the city-state of Gela, whose tipos was the river god Gelas. On the artistically crafted bronze tetras below, the head of Gelas is shown with a barley corn, his hair swirling upward as if in the water. The obverse shows a magnificently sculpted bull, his head lowered as if in defiance.



SICILY, GELA, 420-405 BC. AE 17.5 (Tetras). Bull standing left, head
 lowered; in exergue, three pellets/Head right of young river-god Gelas, barley-
 corn behind. 4.38 g; 17.5mm; 5 h. Jenkins 501; Calciati III, p. 8, 7; Rizzo pl. 19,
 14; SNG Cop 283; SNG ANS 107. Even medium-dark brownish-green
 patination, highly modeled for a bronze; Superb.

The early coins of Gela are remarkable for their lifelike portrayal of the city's patron river god, shown as a man-headed bull. This representation goes back to that of Acheloos, a river god from northwest Greece, and initially was only of him, but the type became extremely popular and was used for local river gods all over the Greek world. The nude and bearded horseman on the obverse may well be thought to be chasing the god: preventing him from indulging in one of his destructive rages! This is, in fact, why river gods were shown as bulls - so many rivers in Sicily, Magna Graecia and Greece itself were calm during most of the year, but they all could become dangerous, raging torrents after a flash flood or during the Spring run offs. The didrachm below is a particularly good example of this coin type.



SICILY, Gela. Circa 490/85-480/75 BC. Didrachm (Silver, 18mm, 8.62 g 1). Bearded horseman, nude, riding right, brandishing spear in his upraised right hand. *Rev.* CEAA Forepart of man-headed bull to right. Jenkins 8. Kraay & Hirmer 155 (*same dies*). Attractively toned and very well struck, with a few very minor marks. Extremely fine. *Ex Gemini VII, 9 January 2011, 97 and Dr. Patrick Tan Collection Numismatica Ars Classica 48, 21 October 2008, lot 30.*

The Carthaginians founded a port on the northwest coast of Sicily, in a place the Greeks called Panormus (“broad harbor”). They called it “Ziz” (meaning “flower”). Its ruins lie underneath today’s city of Palermo. Not much is known about its history during the Greek period, but because of its location and deep harbor, it almost certainly was entangled in conflicts between the Greeks and Carthaginians. Panormus (also called Panormos) did not have a very prolific coinage. The small bronze coin shown below, with the forepart of a prancing horse and artistic head of Apollo, is one of the finest in existence from this mint.



SICILY, ‘ZIZ’ (PANORMOS), c. 350-330 BC. AE 14. Laureate head left of Apollo/Forepart of prancing horse right; below, dolphin. 2.42 g; 14mm; 7 h. Calciati I, p. 272, 12; Lindgren 503. EF. Acq. Paul Rynearson.

Carthage: Minting through Conquest

While Agathokles sought to revive Syracuse’s numismatic past, Syracuse’s great foe, Carthage, was minting coins at the other (western) end of the island of Sicily. The most famous city state along the Mediterranean coast of Africa, Carthage did not strike coins until after the mid-4th Century BC, and it learned the art of coinage from the people it conquered. While Syracuse remained the power in the eastern half of Sicily, Carthaginian forces occupied the western half. Carthage began striking coins using the same weight standard as Syracuse in order to pay its mercenaries in the wars against Dionysios I. It was thus through the occupation of Sicily that the idea of coinage made its way to Carthage.

These “Siculo-Punic” coins were meant to merge into the existing Greek currency of the island, Greek in style and undoubtedly made by Greeks but with

Punic inscriptions. They reflect a fascinating merging of cultural influences. The earliest and most prolific of these coins has an obverse similar to that of the Agathokles tetradrachm, but with a horse's head on the reverse, the symbol or *tipos* of Carthage alluding to the foundation legend mentioned by Virgil (Aen. i, 442 ff.). "Otherwise, the Punic inscription is the only indication that these series of coins are not purely Greek" (Head, p. 877).

On the slightly later coin pictured here, the horse's head and palm are shown on the reverse, but the obverse is influenced by the kings of Macedon coins, with Herakles (Melqart?) in the lion's skin, as on the Alexander III tetradrachms that soon would dominate the numismatic landscape around the Mediterranean. Not only were these Carthaginian coins struck in Sicily, but Greek artists were employed to engrave their dies.



Plate V.16T. Siculo-Punic Coinage, Mechashim (Quaestor's issue), c. 300 BC, AR Tetradrachm (16.50 g). Head right of Melqart wearing lion's scalp/Horse/s head left with palm tree behind; in left field, pellet. Jenkins [SNR 57] 343 (these dies; only one specimen noted). The obverse engraving of this die, from the mint of the Quaestors (treasury officials), is derived from the Alexander the Great coinage minted at Babylon. (This type is normally seen with a weakly struck horse's head, especially around the horse's left eye. Here we have a perfectly centered coin with great detail and an active and fully struck reverse.)

By the mid 4th Century BC, coinage made its way to Carthage proper, which initiated a prolific coinage in gold. The types on the gold stater are Carthaginian, with the head of Tanit on the obverse and the standing horse on the reverse. However, the artistry clearly is influenced by Sicily (compare the head of Tanit on this coin with that of Arethusa on the Syracuse tetradrachm). Carthage occupied a strategic point on the north-south trade route between the Mediterranean and the African interior, from which it obtained gold for its coinage.



Plate V.17T. Carthage, circa 350-320, AV Stater (9.29 g, d=18mm). Head of Tanit I., wearing wreath of barley and leaf, triple-pendant earring and necklace with pendants of acorn shape. Rev. Horse standing r.; below exergual line, \ Jenkins-Lewis 103. From The Barry Feirstein Collection of Ancient Coins Part I, Greek Coins, Numismatica Ars Classica NAC AG, Auction 39, 16 May 2007, Zurich, No. 19. Extremely fine.

VI

The Coinage of Alexander the Great

Alexander III carried out a numismatic as well as political conquest of the ancient Mediterranean and points east. It is clear that both conquests were carefully planned in advance.

As we have seen, local coinages had flourished in hundreds of Greek city-states and colonies around the Mediterranean. Various weight standards were used, and each locale had its own design or *typoi*. Upon assuming the throne after his father's death in 336 BC, one of Alexander's first actions was to reform the Macedonian royal coinage. Confronted by the need to economically unify his future empire, facilitate transactions, and pay his armies, he invented two major universal coin types based on a common weight standard (the Attic standard used by Athens), and in three denominations—two in silver, one in gold. The types and weight standard were carefully chosen to consolidate political support from Greek city states, particularly Athens, which was to be critical for the success of Alexander's conquests, while at the same time paving the way for the acceptance of the new coinage throughout the Greek world and in the soon-to-be conquered lands to the east in Asia Minor, then under Persian control.

The three major Alexander coins include a 1-drachm (approx. 4.25 grams in weight) and tetradrachm (4 drachm, approximately 17 grams) denomination in silver and a gold stater (approximately 8.6 grams).

The two silver denominations share the common type of Herakles wearing a lion's scalp on the obverse and, on the reverse, Zeus seated on a throne, holding a scepter in his left hand and an eagle, his symbol, in his right. The wide appeal of Herakles and Zeus as symbols on the new coinage is evident. Herakles was a legendary hero to all Greeks and recognized ancestor to the Macedonian royal house. The representation of Zeus, the principal Greek god, on the reverse of these coins is remarkably similar to the seated Baal (deity) on Persian coins of the same period. The type chosen for the gold coin was of a helmeted Athena on the obverse and a winged Nike on the back. Athena was the principal deity of Athens, but the design of the helmet she wears is from Corinth. Nike, goddess of victory, holds out a wreath and stylus, an emblem of naval victory, likely recalling Athens' defeat of the Persians (Xerxes) at Salamis 150 years earlier. The coins bear the inscription "of Alexander" (ΑΛΕΞΑΝΔΡΟΥ) on their reverse. At the time of their issue, these coins were demanded for their bouillon value, and the exchange rate of gold to silver was approximately 10:1. Gold staters were not struck at all of Alexander's mints, and the bulk of the coinage as we know it consists of silver tetradrachms.

Alexander started out striking coins at the same mints as his father, at Pella and Amphipolis in Macedon. However, as he conquered new city-states he established or took over mints to strike a vast coinage of gold staters and silver tetradrachms and drachms, most likely moving die-makers from one mint to the next. Advancing into Cilicia (present-day Turkey) in 333 BC, Alexander decided to set up a royal mint at

Tarsus, the administrative center of this newly conquered province. Previously several Persian satraps had used Tarsus to mint substantial military issues, so all of the necessary personnel and installations were there. Martin Price, who wrote the most authoritative work on the coinage of Alexander the Great, describes it thusly:

“When Alexander arrived in Cilicia he found a well established Persian coinage produced from Tarsus by the satraps. The silver staters displayed the figure of Baal of Tarsus, seated and holding his flowering sceptre...the same engravers clearly turned from cutting dies for the Persians to producing those of the imperial Macedonian coinage. Details of the throne, drapery, and figure can be closely compared in the two series, and it is certain that the mint began to strike the Alexander series without any serious break in production...immediately after Alexander’s arrival in summer 333 BC (p. 369).”

The first issues of Alexander tetradrachms at Tarsos show the hand of the old die engravers continuing their work for their new master, with the seated Zeus on the reverse clearly cut by same hand that had previously produced seated Ba’altaars for last Persian satrap Mazaeus. A silver stater struck not long before Alexander the Great’s conquest of Tarsos is shown here. One can compare the seated Ba’al on this coin with the reverse type of the Alexander the Great tetradrachm below. On each of the two the deity (Baaltars on the Mazaios coin, Zeus on the Alexander tetradrachm), is seated on an ornate throne holding a scepter with one hand and an eagle in the other. The similarity of the two deities appears to be no accident. It would make perfect sense for Alexander to create a common coinage for his vast kingdom by adapting major coin types that were well known or even already in circulation in the lands he conquered. The seated deity lent itself well to adaptation for Alexander’s new coinage. However, the reverse type of the lion attacking a steer did not.



Plate VI.1T. Mazaios, 361 - 334 BC. AR Stater minted at Tarsos, ca. 359 – 336 BC (11.06 g.). Sitting enthroned Baaltars with eagle, vine, grain ear and scepter/lion attacking bull. SNG The Levant 106. Gorny and Mosch Auction 159, Lot 236, Monday, October 8, 2007.

A similar type with a more elegant Baaltars on the obverse and the striking facing bust of Athena on the reverse was apparently struck at Tarsos after the arrival of Alexander. We do not know why Alexander would authorize the striking of both his own Heracles-Zeus type and the previous Ba'al type simultaneously. One possibility is that the older coin coexisted with the heavier Alexander tetradrachms as a way to ease the latter into circulation while still doing business with other city states in the area, which used the Phoenician standard. The Cilicia coin from c. 333-323 BC represents the height of artistry reached in this city-state before its liberation from the Persians in 333 BC. The facing head of Athena, in such contrast with the depiction of Athena in profile on Athenian and Corinthian coins, no doubt was influenced by the facing-head coins of Sicily seventy years earlier.



Plate VI.2T. Cilicia, Tarsos, c. 333-323 BC, time of Alexander III, the Great. AR Stater. Baaltaars seated left on ornamental stool, holding lotus-tipped scepter in his right hand; to left, ear of grain and bunch of grapes; to right, ivy leaf; beneath stool, "T"/Facing bust of Athena wearing triple-crested Attic helmet. 11.04 g; 23mm. BMC 74; SNG Levante, Supplement I, 21. Beautifully toned; Superb.

What follow are outstanding lifetime examples of Alexander the Great's silver tetradrachm and gold stater, as well as a fine example of a silver drachm minted shortly after Alexander's death in Babylon in 323 BC.

This tetradrachm of Alexander the Great, like the Cilicia coin of Ba'al minted at the same time period, was minted at Tarsos. It is described by Rynearson as "the most attractive lifetime tetradrachm of Alexander that has crossed my desk." Like most lifetime issues, it has both legs of Zeus in front of the throne on the reverse, with the feet placed on a low stool (most of the posthumous issues have one leg pulled back). There are other differences between lifetime and posthumous issues, but they tend to vary across regions. Martin Price's book covers the dating of Alexander III's coinage individually by mint.¹⁶ This specimen is from die number 3032 as documented in Price's

¹⁶ Martin Price, *The Coinage in the Name of Alexander the Great and Philip Arrhidaeus* (2 vols), published by The Swiss Numismatic Society and British Museum Press, 1991. This reference is the most up-to-date one on the extensive coinage of Alexander. Previous to this,

seminal work. At the time this coin was struck, it took five silver tetradrachms to equal one gold stater. The ratio of silver to gold was 10:1 (around 17 grams x 5 = 85 grams of silver equaling one gold stater of c. 8.5 grams of gold), having fallen from 13:1 before Alexander's conquests released vast stores of gold from the Persian treasuries onto the market.



Plate VI.3T. Macedonian Kingdom, Alexander III, the Great, 336-323 BC, AR Tetradrachm (lifetime) minted at Tarsos, c. 327-323 BC (17.17 g). Head right of young Herakles wearing lion's skin/Zeus enthroned left, holding eagle and scepter; in left field, plow; under throne, "theta"; above right, pellet. Price 3032. Muller 1284. A wondrous example of a tetradrachm minted during the lifetime of Alexander. Struck in high relief from beautifully detailed dies; Superb. *Compare the similarity of the earlier Tarsos stater's depiction of Baal seated left with that of Zeus on this reverse. Also, note the three pellets (or "M"?) behind the obverse ear (artist's initials?).*

Relative to the much more commonly seen posthumous issues, today the lifetime coins are at least twenty times rarer; also, since they were well-used, they tend to be worn and lack character. Lifetime issues from Tarsos of Alexander the Great employed the plough symbol on gold staters, silver tetradrachms, didrachms, drachms and hemidrachms concurrently with a kantharos or an ivy leaf. No other city used the plough as a mint symbol for Alexander's coinage. Posthumous Alexander III coinage from Tarsos utilized a Nike flying or a caduceus, among other symbols, but no plough.

there was only a 19th century study/arrangement by Muller. Scholars have been afraid of the breadth of Alexander's coinage for centuries!



Plate VI.4T. Macedonian Kingdom, Alexander III, the Great, 336-323 BC, Gold Stater (lifetime) minted at Sidon in Phoenicia, 327/6 BC (8.61 g). Head right of Athena wearing crested Corinthian helmet ornamented with serpent/Nike standing left holding wreath and ship/s mast; in left field, palm branch and date in Aramaic (year 7). Price 3482. Newell (*The Dated Alexander Coinage of Sidon and Ake*) 21. Müller 1409. Of exceptional style and remarkable condition.

Silver tetradrachms were the mainstay of Alexander's coinage; however, Alexander also minted a fairly prolific coinage in gold, fed by new bouillon from the Persian treasuries he captured. This rare gold stater of Alexander the Great is special for many reasons. Like the tetradrachms, most of the gold coins were struck posthumously. This one was struck three or four years before Alexander III's death. Only two mints dated their issues—those of Sidon and Ake. This coin is from Sidon in Phoenicia, and is dated year seven (by an Aramaic letter which looks something like a tipped "z" in the left reverse field), corresponding to 327/6 B.C. Year one is reckoned at the time Alexander the Great arrived in Phoenicia (autumn of 333 B.C.). The mint mark sigma iota (ΣΙ) is in the lower left field, close to a palm branch. This coin is of fabulous artistic style, with great delicacy and detail on both the obverse and reverse. It is perfectly centered and boldly struck.

"As these coins were such valuable commodities, they were struck very carefully, but, this particular example has to be at the top of boldness of strike, mint luster and, certainly, artistic flair. No doubt it was part of either an important family's wealth (of course there were no banks at the time, so, money was hoarded in the most precious metal possible), or a treasury hoard" (Rynearson).

A comprehensive die sequence of the dated coinages of Sidon and Ake was painstakingly assembled by Newell and Merker (1964), one of the few ever die sequences ever undertaken for a dated coinage.¹⁷ It is described in detail in Price (1991, pp. 435-44). This specimen was struck from die number 3482 documented in Price.

¹⁷ E.T. Newell, *The Dated Alexander Coinage of Sidon and Ake*, New Haven/Oxford, 1916 (Yale Oriental Series: Researches 2) and T.L. Merker, "Notes on Abdalonymos and the Dated Alexander Coinage of Sidon and Ake," *ANSMN* 11, 1964, 13-20.

Silver tetradrachms and gold staters were not practical for everyday transactions. This is a particularly nice example of a lifetime issue of the smaller-denomination, drachm coin struck at the Miletus mint, on what is now the west coast of Anatolia, Turkey. It is of the same basic type as the tetradrachm but, naturally, only $\frac{1}{4}$ the weight. The drachm denomination presents the die-artist with a very small canvas on which to carve such an intricate pair of images. Note the detail and artistry in the face of Herakles and even the musculature in Zeus' body. This coin was struck from die number 2090 documented in Price's work. The existing 1-drachm Alexander the Great coinage is small compared with the abundant tetradrachms available at almost every coin auction.



Plate VI.5T. Macedonian Kingdom, Alexander III, the Great, 336-323 BC, AR Drachm (lifetime) minted at Miletus, c. 325-323 BC. Head right of young Herakles wearing lion's skin/Zeus enthroned left, holding eagle and scepter; monogram in left field. Price 2090. A handsome and detailed example in superb condition.

The type of Alexander the Great continued to be struck for hundreds of years after the great leader's death. Most surviving issues, therefore, are posthumous, like this superb silver drachm, minted at Sardes, also in modern-day Anatolia. It is the same type as the first drachm but of a different style.



Plate VI.5T. Macedonian Kingdom, Alexander III, the Great, 336-323 BC, AR Drachm minted at Sardes, c. 323-319 BC (4.25 g). Head right of young Herakles wearing lion's skin/Zeus enthroned left, holding eagle and scepter; torch in left field, monogram under throne. Price 2637. SNG Cop 878. Thompson (ANS NS 16) series XV. Unusually concise and well-executed dies.

VII

Coins After Alexander III

The “Diadochi” and Hellenistic Portrait Coins

After Alexander’s premature death in 323 BC a veritable mess ensued. Ptolemy, one of Alexander’s leading generals, received Egypt and managed to keep control of it amidst incessant warfare, setting the stage for a long line of Ptolemaic rulers, each with his own coinage. The general Antigonus had control of Asia Minor, Syria, and Mesopotamia at one time (316); however, Lysimachus, Seleucus I, and Ptolemy I united against him. Both Antigonus and Ptolemy were defeated at the battle at Ipsus (in 301 BC), and Antigonus was killed. Lysimachus took control of Thrace and later (in 301 BC, after the defeat of Antigonus at Ipsus), West Asia Minor. In 286 B.C. he added Macedonia by defeating Pyrrhus, but five years later he was defeated by Seleucus. The general Seleucus (“the Nikator”) received Babylonia, enlarged his holdings by conquering Susiana and Media, and then invaded Northwest India. Later (c.305) he yielded part of present Afghanistan to Chandragupta but received war elephants in return. When Antigonus was defeated and killed at Ipsus in 301 B.C., Seleucus gained a large part of Asia Minor and all of Syria. He finally won Asia Minor by defeating Lysimachus in the battle at Corupedion in Lydia in 281, an event that marked the end of the wars of the *diadochi*, or inheritors of Alexander’s empire. This left the descendants of Ptolemy, Seleucus, and Antigonus as the chief claimants to power in the Hellenistic age.

It is remarkable testimony to Alexander’s powerful legacy that his coin types did not change for years following his death. The new rulers gradually added their own names to the reverse, but coins bearing Alexander’s name continued to be struck at almost all mints still in operation along with the same types bearing the names of his successors. The only exception was Ptolemy I, who early on initiated a coinage of silver tetradrachms with the same seated Zeus on the reverse but with a deified Alexander on the obverse wearing an elephant’s scalp with trunk and tusks.

Demetrius Poliorcetes

Alexander’s general Antigonus continued to issue Alexander types throughout his life, but his son, Demetrius Poliorcetes, began issuing his own tetradrachms in 301 BC. They depicted the winged Nike on a ship’s prow, carrying a trumpet and a signal mast (stylis) on the obverse and Poseidon, brandishing his trident, on the reverse. Demetrius controlled a number of bases in the eastern Mediterranean and Aegean, and the choice of Nike for this coin seems to have been an effort to re-establish his position following his crushing defeat in the battle of Ipsus.



Plate VII.1. Demetrius Poliorcetes, 306 – 285. AR Tetradrachm, Pella circa 294-293 BC (17.26 g). Nike, holding trumpet and stylus, standing l. on prow. Rev. DEMHTRIOU / BA - SILEW - S Naked Poseidon striding to l., brandishing trident in upraised r. hand and stretching out l. arm which is wrapped in his mantle; in field l., monogram. In field r., dolphin / star. Dewing 1196. Newell 68. Numismatica Ars Classica, Auction 39: The Barry Feirstein Collection of Ancient Coins Part I. Virtually as struck and Fdc.

Lysimachus

Lysimachus had no mint and did not strike any coins before the battle of Ipsus. After this great victory, though, he acquired western Asia Minor with its many important minting cities. In 297/6 BC he introduced a new coinage with the head of the deified Alexander with diadem and ram's horn showing him to be the son of Zeus Ammon. On the reverse is a seated Athena, her left arm leaning against her shield. Her spear is behind her, and in her right hand she holds a small Nike who places a wreath over the first letter of King Lysimachus' name. Lysimachus thus became one of the first rulers, along with Ptolemy, to portray a human being on a coin.



Plate VII.2T. Kingdom of Thrace, Lysimachos, 323-281 BC. AR Tetradrachm minted at Smyrna, 287/6-282/1 BC (17.02 g, 29.5 mm). Diademed head right of Alexander the Great, wearing horn of Ammon/Athena enthroned left. Thompson (*Essays Robinson*) 237 (this obverse die). Expressive style in high relief, EF. *Note:* This very rare emission from Smyrna is entirely known from a single obverse die; at the time of Margaret Thompson's study, there were only 8 examples cited.

This coin type is important not only because it is one of the first actual portrait coins of Alexander, but also because it was the inspiration for the old English bronze penny; compare its reverse, showing Britannia seated left, to the seated Athena on the reverse of the Lysimachus tetradrachm. The style on this particular tetradrachm is unsurpassed. This tetradrachm of Smyrna ranks with eight of the many obverse dies minted at Pergamon as being among the finest, most realistic and charismatic portraits of the deified Alexander the Great.

The rarity of the mint is well-known—there is only one obverse die known for this issue from the city of Smyrna in Ionia, the probable birthplace of Homer.



Plate VII.3. England, 1967. English bronze penny with Britannia seated left.

Seleucus I (Nicator)

Seleucus, who had been one of Alexander's most brilliant officers, received the satrapy of Babylon soon after Alexander's death and then extended his empire until it stretched from the Aegean Sea to the Indus, ruling over the largest part of what had been Alexander's empire, including all of the eastern satrapies. He thus became the founder of the Seleucid dynasty. For a time Seleucus continued minting Alexander tetradrachms, but in 295 BC he moved his capital from ancient Babylon to the newly founded city of Seleucia in present-day Syria, where he began to mint a coinage of his own. Silver tetradrachms and this drachm, struck at Seleucia, depict the head of Zeus on the obverse, reminiscent of the obverse of the silver staters of Philip II in Macedonia. On the reverse is an elephant quadriga pulling Athena. It alludes to Seleucus' use of battle elephants obtained through a treaty with the Indian king Chandragupta, in which he bartered whole provinces for 500 war elephants. The elephants proved decisive in the battle of Ipsus a year later, in 303 BC. The floating anchor is a common device adopted by Seleucus because of an anchor-shaped birth mark he had on his thigh, according to Seltman (p. 227). This is a well-centered, high-grade example of an important type; note the remarkable detail on so small of a coin.



Plate VII.4T. Seleucid Kingdom, Seleucus I Nicator, 312-281 BC, AR Drachm minted at Seleucia-Tigris, 2nd workshop, ca. 296/5-281 BC (4.27 g). Laureate head of Zeus right/Athena in elephant quadriga. SC 131.5c. ESM 78A. Acquired from Freeman and Sear (G6363 W PLRUY, June 2006).

Thereafter, eastern Greek coinage quickly evolved into a portrait gallery of living rulers, a precursor of the Roman coinage to come. The apex of Hellenistic portrait coinage was in the eastern Mediterranean, in Syria, Egypt and Bactria, the easternmost Greek city-state in what is now Afghanistan. The mints of all three of these kingdoms, Hellenized legacies of Alexander's empire, created striking portrayals of their rulers.

The portraits of Seleucus' successors (Seleucus II-IV and Antiochus I-V), often beautifully crafted, become the obverse types on Syrian coins from 281 to 162 BC. These perhaps constituted the finest portrait gallery of kings ever to appear on coins. Of all the portraits of the Seleukid dynasts, this tetradrachm of Antiochos V (Eupator), the boy king, is among the most magnificent. Antiochos inherited the throne at the age of 9 after the sudden death of Antiochos IV (brother of Seleucus IV) in 164 BC. He was murdered after two years by his cousin, Demetrius I.



Plate VII.5T. Syria, Seleukid Kingdom, Antiochos V, 164-162 BC. AR Tetradrachm minted at Antioch or Seleucia (16.61 g). Diademed head right of Antiochos V/Zeus enthroned left, holding Nike and scepter; monogram in exergue and outer left field, inscription ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ ΕΥΠΙΑΤΟΡΟΣ. Houghton CSE 141 (this coin). Cf. SNG Israel I, 1247 (no monogram in outer left field). Ex NFA XVIII, lot 337. Reportedly from the Ma'aret en-Numan hoard (1979). This very rare coin possesses a magnificent portrait of this child-king, then about 10 years old.

The Ptolomies of Egypt

The first Egyptian coins were gold staters and silver tetradrachms issued by Alexander III. After Alexander's death, Ptolemy I minted coins with the deified Alexander in the elephant's scalp. Around 300 BC he began placing his own head on the obverse, with an eagle standing on a thunderbolt on the reverse. Ptolemy II continued the coinage with his father's head on the obverse, sometimes referred to with his cult name Soter. After that the Ptolemy coinage depicts a variety of regal figures. The most characteristic devices on these coins are exemplified by this magnificent example from the reign of Ptolemy V, showing the diademed head of Ptolemy I and the eagle/thunderbolt type on the reverse.

Ptolemy V was the husband of Cleopatra I, daughter of the Seleucid king Antiochus III. He became king at age 5 upon the death of his father, after which the kingdom was paralyzed under the rule of a series of regents. He was officially crowned at 14, at Memphis. The text of the famous Rosetta Stone is a decree from Ptolemy V, describing the repealing of various taxes and instructions to erect statues in temples. By the time he died at the age of 29, the Egyptian empire had lost all of its possessions except Cyprus and Kyrene.

The monarchy that followed the empire of Alexander, together with its coinage, lasted until Egypt was absorbed by Rome in 30 BC.



Ptolemaic Kingdom of Egypt, Ptolemy V, Epiphanes, 204-180 BC. AR Tetradrachm (14.22 g; 26mm.). Diademed head of Ptolemy I right/Eagle standing left on thunderbolt. Svoronos 1231. A magnificent example; Mint State and fully lustrous.



Ptolemaic Kingdom of Egypt, Ptolemy V Epiphanes. AV mnaieion (27.76 g) (Octodrachm). Veiled head of the deified Arsinoë II r/Fillleted double cornacopiae. Svornos 1242; SNG Copenhagen 322. Choice XF. Acq. Heritage Auction Galleries.

Kingdom of Bactria

Bactria, part of present-day Afghanistan, was at the easternmost extreme of the ancient Greek world and an important link between Greece in the west and India and China to the east. Alexander the Great marched through it on his way to India, and Roxanna, one of its princesses, became his wife. After Alexander's death in 323 BC Bactria was ruled by Seleucus and then by his son, Antiochus, who founded new Greek towns, a new capital city (Bactra, or Balkh), and military colonies, doing all that he could to Hellenize the region. In 250 BC, the Seleucid satrap, Diodotus, revolted against the Seleucid king Antiochus II and established the independent kingdom of Bactria. For the following century, Bactria struck a variety of purely Hellenic yet distinctive coins with vivid portraits of kings on their obverse and Greek divinities on their reverse. Lacking other archeological evidence, these coins have become an important source of information about the Indo-Bactrian civilization.

Perhaps the most unique and impressive of the Bactrian portrait series is that of the Bactrian ruler Demetrios, pictured on this coin. Having extended Bactria's dominions into India, he is depicted with his head in an elephant skin, while Herakles stands crowning himself on the reverse. The elephant's scalp no doubt symbolizes Demetrios' victories in India.



Plate VII.8T. Kingdom of Baktria, Demetrios I, c. 200-190 BC, AR Tetradrachm (16.91 g; 35 mm). Diademed and draped bust right of Demetrios I wearing elephant's skin headdress / Youthful Herakles standing facing, placing wreath on his head and holding club and lion's skin. Bop. Série 1, monogram D. SNG ANS 189. This is the very rare variety with filleted obv. border, perfectly centered. Rynearson 24g (this coin).

Perseus, the Last Macedonian



KINGS of MACEDON. Perseus. 179-168 BC. AR Tetradrachm (34mm, 15.55 g, 12h). Pella or Amphipolis mint; Au-, mintmaster. Struck circa 173-171 BC. Head right, wearing diadem / ΒΑΣΙΛΕΩΣ ΠΕΡΣΕΩΣ, eagle standing right on thunderbolt; E below, AY (mintmaster's) monogram to right, ΛΑ monogram above; all within oak wreath; below, plow right. A. Mamroth, ZfN 38 (1928), p. 24, 21b3. Philip 24; SNG Copenhagen 1269, München -; GC 6804, SNG Alpha Bank 1133, Hunterian 1. EF, lightly toned. Perfectly struck and well centered on a broad flan. Beautiful portrait in high relief.

Hellenistic “Wreathed” Coinages of the Second Century BC

Beginning about 166 BC, in the middle of the period that Cook (p. 534) refers to as the “continued decline of art,” Athens and a few Greek cities in the Northern Aegean began to issue a new silver coinage, mostly tetradrachms, on the Attic standard and of the finest artistic style. These coins became known as *stephanos*, after the Greek word for wreath, because their reverse sides depicted a large wreath border encircling some symbol of the issuing city. The obverse featured refined portraits of titular gods or goddesses—Athena, Artemis, or Apollo—of the city. The wreaths were symbols of victory, and these coins evidently celebrated some important Panhellenic victory. Central Greece had recently been liberated from the hated Macedonians, by the Roman general Aemilius Paullus’ victory at Pynda. This was widely hailed as a triumph for all of Greece. In 166 BC, Athens was rewarded with the opening (under her supervision) of a major free trade port at Delos, and the first city states that struck *stephanophorics* were all partners of Athens in this Delian trade confederation. Their wreathed coinages were interchangeable and equivalent

trade issues. Rome no doubt approved this new style of coinage in an effort to displace the omnipresent Macedonian “Alexanders,” which had been the *de facto* trade coinage of the Aegean for 200 years.

Ten years later the Romans helped the Greek Aegean cities of Pergamon, Kyme, Myrina and others defeat the aggressor Prusias II of Bithynia. Prusias was forced to pay the cities on which he had made war an indemnity of 100 talents of silver, which almost certainly provided the bouillon for the wreathed coinages of Kyme, Magnesia, Myrina, Aigiai and Heracleia. Most historians now agree that the wreathed coinages of these Greek cities celebrated their joint victory over Prusias, continuing both the fine artistic style of the earlier Athenian and other stephanophoric coinages and at the same time disseminating a non-Macedonian motif of trade coinage that Rome favored.

One of the most beautiful and charming of the stephanophorics is a series of tetradrachms from Kyme, the largest issuer and one of the largest and most prosperous Greek cities of the Aegean. This city was given the name of Amazon Kyme, after a tribe of female warriors who were believed to be the original inhabitants of the area. In Greek mythology, the Amazons were an ancient tribe of female warriors. There may be some factual basis to this myth in the women warriors among the Scythians, but the classical Greeks never ceased to be astounded at such role-reversals.

The Kyme wreathed tetradrachm shows the Amazon Kyme on the obverse and, on the reverse, a horse prancing right inside a laurel wreath, his left leg lifted high into the air. Beneath the horse is the name of the supervising magistrate. On the die used to strike this coin, originally the magistrate’s name was METROPHANES, the first magistrate in the Kyme series. It can be seen in the background using a magnifying glass or stereo microscope. It was later erased with a file in the die. This accounts for the cross-hatching. Then, the newly appointed magistrate’s name was engraved in the die in the usual manner for the Hellenistic era (connect the dots): KALLIAS (the second magistrate in the series). This revision of the die reveals just how valuable ancient coin dies were, as well as how adaptable.

Just beneath the horse’s raised hoof is a one-handled cup, the meaning of which is unknown, and further to right, extending vertically, is the so-called “ethnic,” KYMAION, meaning “of the Kymaions.”

Kyme minted twelve issues of stephanophoric tetradrachmas, each issue defined by the name of the supervising magistrate found on the reverse. Three of these issues were large, averaging over 18 known obverse dies each. Several issues were quite small, requiring only a few dies. The whole series could easily have been struck within the 10-year period from 154 to 145 BC. If it were not for two large modern hoards found in Turkey, the tetradrachms of Kyme would be uncollectible rarities.



Plate VII.9T. Aiolis, Kyme, c. 165-160 BC, AR Tetradrachm (16.71 g). Head right of the Amazon Kyme/Horse standing right; around, laurel wreath. Oakley (ANS MN 27) 12. BMC 73. cf. Oakley 12.6 (this obverse die). Reverse die altered from a die initially inscribed with the magistrate's name: Metrophanes. Now recut for the magistrate Kallias.

A similar style of coin was issued in Magnesia ad Maeandrum in nearby Ionia, showing Artemis on the obverse, her bow and quiver on her shoulder, and on the reverse, Apollo standing on a maeander pattern and leaning against a tripod. The tetradrachm of Magnesia ad Maeandrum shown below was struck from what arguably were the most beautiful dies in this series.



Plate VII.10T. Ionia, Magnesia ad Maeandrum, c. 165-160 BC. AR Tetradrachm (16.83g, 32 mm). Diademed bust right of Artemis, bow and quiver at shoulder/Apollo standing left on maeander pattern, resting left elbow on tripod; all within laurel wreath. Cf. Jones (ANS MN 24) pp. 102-104 [these dies not illustrated]; SNG Berry 1068; Weber 6003. Beautiful depiction of Artemis.

The third major wreathed coinage was that of Myrina, pictured below, displaying Apollo on the obverse.



Plate VII.11T. Aeolis, Myrina, Mid-2nd Century BC. AR Tetradrachm (17.03g). Laureate head of the Apollo Grynium facing right, hair braided, ribbon behind/Apollo Grynios walking right, holding phiale and olive branch, omphalos and amphora at feet, the whole within laurel wreath. Choice example of a beautiful type. SNG Lockett 2222.

The wreathed coinages of these Greek cities, beginning in 154 BCE, lasted only as long as the indemnity payments that supported it—ten to fifteen years on average, but as few as five years in smaller cities like Magnesia.



VIII

Conclusions

Many ancient Greek coins are “among the most exquisite productions of ancient art...a delicacy of workmanship carefully maintained, even in things on the smallest scale.”¹⁸ When you hold a Roman coin in your hand—or the coin of any other civilization, for that matter—you immediately know that it is a

¹⁸ Sir Charles Newton, quoted in the 1903 Handbook to the British Museum.

coin. Greek coins are different. One could just as easily be holding a miniature sculpture. Unlike Roman coins, many ancient Greek coins do not even have ethnics identifying the city-states that issued them, and their *tipoi* usually depict mythical figures, not living emperors and real-life events.

Because of this, it has taken much longer to achieve an understanding of where ancient Greek coins come from, the sequence in which they were struck, the meanings of the images they portray, and the role they played in the economies and societies of the ancient world. Even after the tremendous advances made by numismatists who dedicated their lives to the study of the coinages of specific city-states, much remains to be learned about ancient Greek coins. Doing so requires one of the most unique combinations of disciplines imaginable. Where else but at an ancient Greek coin lecture is one likely to find a combination of classicists, ancient historians, artists, archeologists, and economists engaged in lively debate within the same room?

As cities around the Mediterranean fell to the Romans, so did their coinages. Numismatics would never be the same. The tremendous diversity of Greek coins depicting gods, goddesses and flying horses gave way to the uniformity of Roman imperial coins depicting living emperors and propagandizing military exploits. Coins continued to be struck from hand-carved dies (machine-manufactured coins did not appear until long after the fall of Rome). However, the world of numismatics would never again witness the artistic beauty and sculptural qualities that the Greek world created during these first four centuries of numismatics.

References

- Cook, Edward T. 1903. A Popular Handbook to the Greek and Roman Antiquities in the British Museum. London: Macmillan and Co., Ltd.
- Davis, Norman. 1967. Greek Coins and Cities. London: Spink & Son Ltd.
- Ebbott, Mary. 2003. Imagining Illegitimacy in Classical Greek Literature. Lanham, MD: Lexington Books.
- Goldsborough, Reid. 2004. "Medusa Coins: They'll Transform You." The Celator 18(6): 6-22.
- Head, B.V. 1911. Historia Numorum. Oxford: Clarendon Press. (On line at <http://www.smbk.ox.ac.uk/coins/eng/>.)
- Jenkins, G.K. 1990. Ancient Greek Coins. London: Spink and Son, Ltd.
- Kraay, Colin M. 1976. Archaic and Classical Greek Coins. New York: Stanford J. Durst.
- Milavic, Anthony F. 1993. "The First Greek Wrestler Coin." International Journal of the History of Sport 10:3, 409-417. URL: <http://dx.doi.org/10.1080/09523369308713839>
- Mørkholm, Otto. 1991. Early Hellenistic Coinage from the Accession of Alexander to the Peace of Apamea (336-186 B.C.). Cambridge: Cambridge University Press.
- Price, Martin J. 1991. The Coinage in the Name of Alexander The Great and Philip Arrhidaeus. London: British Museum Press.
- Price, M. and Waggoner, N. 1975. Archaic Greek Silver Coinage — The "Asyut" Hoard. London: V.C. Vecchi and Sons.
- Rhodes, P.J. 2007. The Greek City States: A Source Book. Cambridge: Cambridge University Press.
- Seltman, Charles. T. 1933. Greek Coins. London: Methuen and Co., Ltd.
- Thompson, Margaret, Otto Mørkholm and Colin M. Kraay, Eds. 1973. An Inventory of Greek Coin Hoards. New York: The American Numismatic Society.

Appendix

A Note about Forgeries

"How do you know that a coin is genuine?" There have always been forgeries of coins (and art, and other things), even in ancient times. Some coin forgeries done in ancient times are even valuable in the market today! The best way to know an ancient coin is genuine is by obtaining it from a reputable dealer or auction, and to make sure that the coin's pedigree is well documented—who owned the coin before, what auctions it was sold in, what publications (including auction catalogues) it appeared in, the sorts of information I've included in the coin descriptions in this manuscript.

The rarest ancient Greek coins are like Rembrandt paintings: they are well known, and if a new one, previously unknown, suddenly appears on the market, it will be carefully scrutinized to make sure it is authentic, and hopefully to make sure it was not removed from the country of origin illegally, as well.

I asked Paul Rynearson about forgeries of ancient coins, and this is how he answered:

There are two principal types of counterfeits:

1) Those made by the casting method. This is similar to the lost-wax method of making metallic items such as jewelry settings and small sculptures. It is the easiest method to use for making large numbers of copies. In the past this has also been the most easily recognizable forgery from its casting pits (often of the same size) and inherent loss of detail. When you look at most all cast coins with a magnifying glass, you see a softness, an indistinctness. Lately with improved methods, such as centrifugal casting, you have to look more carefully for the pits.

2) Those manufactured by the striking method. Almost all ancient coins were struck between dies, which were usually made of hardened iron. Some creative individuals have fashioned their own dies in the same manner as the ancients, and actually struck the coins in replication. Here, at least one of the many parameters will give the false coin away -- the style, the way the letters of the inscription are formed, the amount of pressure used and the number of strikes made to the blank, the metal content, the patination, etc. Also, it helps greatly to know about hoards as they are found. We see certain striking characteristics, the "look" of the metal and toning when a large number of coins cross dealers' desks.

Thirty to 150 years ago, there were some forgers whose work occupies a whole volume, like Christodoulos and Becker. Today the situation has gotten worse with the dies being manufactured from a genuine coin. They're also making dies out of hard plastic which deteriorate quicker than metal, but give excellent results if only a few counterfeits are produced. These usually are copies of very rare coins of which the forgers only want a few specimens to disperse. There's a well-documented instance in which a person gained access to the British Museum coins, made a few copies of rarities, each worth \$100,000 and more. This fellow made dies from the obverse of one coin with the reverse of another to further confuse numismatists. Then, he employed authentic Roman gold aurei for his plans. Thus, the metal was ancient, and he turned authentic common Roman coins into those portraying the rarest usurpers. He was finally caught, with the resulting many years in jail and high fines. Some of the most experienced numismatists worldwide were taken in by his work. Reputations were lost, but we learned the details of yet one more clever method of falsification.

You do want to deal only with people who guarantee for their lifetimes the authenticity of the coins they sell. As you notice in my coin descriptions, many specialized references have been written in a scholarly manner about one city, and conclude with photographs of all of the die combinations the authors have been able to find, with particular specimens noted. These are termed die studies, which exist mainly for the coinages of Sicily and Italy. There were about 1000 different Greek city-states that issued autonomous coinage, and it is not unusual for scholars to spend 20-40 years on just one of their die studies.

Through making dies and coining by the ancient process, modern numismatists have found that ancient dies could last for up to 10,000 impressions of the lower (obverse) die and around 7,000 for the upper (reverse) die. The reason for the difference is that the upper die was directly struck by blows of the heavy hammer, so it wore more quickly. Sometimes water would rust the dies, or the hardening of the iron would not be constant, so the dies would develop breaks or cracks. These developing die-breaks aid us in chronologically ordering the specimens, thereby giving the sequence of striking and an approximation as to the date of issuance. These die studies greatly aid in the discerning of forgeries.

There is at present a worldwide association linked with the IAPN that is our counterfeit department, the IBSCC. Through the

years they have issued scores of bulletins concerning the coin forgeries that have been seen by the members. A good general book on counterfeits is Roman Coin Forgery by Alan van Arsdale.



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