

Small Change for the Poor
Ionia, Miletos, c. 525 to 494 BCE
Mike Maier, NI #2018

Around the turn of the millennium I sent several old bronze or copper coins to an attribution committee sponsored by Numismatics International. Many of the coins came back marked, "small change for the poor." Was this all that could be said about the denomination? Eventually I realized that my collecting interest had been defined: ancient and medieval coins of bronze, copper, brass and lead, and the small, sometimes tiny silver coins that they replaced. As Robert Tye eloquently stated, these are the coins that bring us into contact with the past as it was lived. "Small Change for the Poor" is about these largely obscure coins.

In "Small Change for the Poor," I use the international standard for dates and the non-Anglicized forms of proper nouns as much as possible. For the oldest coins I use BCE, before the Common Era, rather than BC, and later coins are CE for the Common Era, in preference to AD. For pre-Roman Greek coins, of which I've been fortunate enough to acquire a good handful, I use the spelling conventions partially adopted by David Sear and generally available from Wikipedia. For example, Miletos is a better transliteration of the Greek, whereas Miletus is the Latin name for the city. Similarly, Herodotos is a better rendering of the name of the ancient historian than Herodotus, even at the risk of consternation among many readers. The letter C is not in the Greek alphabet, and I almost invariably substitute K, which is in the Greek alphabet, especially to indicate that the pronunciation should be a hard C. The culture centered on Mycenae is not pronounced Mysenae, but Mykenae; why not write it thus? Similarly Thucydides becomes Thoukydides. Still, many will prefer Caria to my Karia and Corinth rather than Korinth. Finally, I retain ch for the Greek *chi*, even though the sound is K, as in Christian or Chios.

So I begin my investigations with my earliest ancient coin, from Miletos. The Greek city of Miletos became Miletus to the Romans and is Miletus to most English speakers, but is Milet to the Turks and the Germans, both of whom have an especial interest in the place. The ruins are located in the marshlands near the coastal town of Akkoy, in the Turkish province of Aydin. Miletos was the southernmost city of Ionia, which was a confederation of Greek city-states on the Turkish coast of the Aegean Sea. Ionia was bounded on the north by Phokaia and included Ephesos and the currently Greek islands of Samos and Chios. Ionia, said Herodotos, had the most pleasant climate compared to all the known lands, and the land was fertile, though not the most fertile.

The twelve Ionian cities were established through waves of sea-borne invasions. Herodotos and modern scholars agree that the post-Mykenaeen Greeks who colonized Ionia were from many tribes of the homeland across the Aegean, not just Ionians from Athens. As if to illustrate this point Herodotos noted that the Greeks of Ionia spoke four different dialects. By about 700 BCE Ionia was prospering from ship-borne commerce. The Ionians were also absorbing cultural influences from Egypt, Lydia, and other empires and peoples of the "barbarian" east.

Well before 1000 BCE, Miletos itself was perhaps the site of a Minoan settlement, and certainly a Mykenaeen (also known as Achaeen) settlement during the time of the Hittite Empire, and the city was part of Karia before it became Ionian Miletos. The Ionian city was on the bay of the River Maeander (Buyuk Menderes), through the meandering river eastern trade goods could be transported from Lydia. Miletos had an excellent protected harbor and a powerful fleet. In the sixth century BCE the city was perhaps the wealthiest in the Greek world (Hellas) and was home to the philosophers Thales, Anaximander, and Anaximenes, and the historian Hekataeos.

Marxists and capitalists alike point to Miletos as a progenitor of capitalism. One relevant story concerns Thales (c. 624-546 BCE). It has two endings: either "the father of philosophy" became rich or merely sought to show the possibility of riches when he cornered the market on olive oil using his knowledge of how to forecast a crop yield. Many a modern financial firm has Thales as part of its name, and it is not difficult to find web pages even in English that excoriate the reputed capitalist excesses of Miletos.

Like other Greek city-states Miletos controlled surrounding towns and agricultural lands where olives, corn, sheep, etc. were raised. The original source of its riches may have been its fine woolen clothing, much in demand by the wealthy, who were serviced along ever-expanding trade routes. Within Milesia too was Didyma, also known as Branchidae, site of an important temple and oracle of Apollo, which perhaps served as the mint. One story has it that Miletos was founded by a son of Apollo, who named the city after himself. One of Apollo's favors was colonization. Perhaps the priest class propitiated the god well, as the temple received many gifts and the Milesians did establish as many as a hundred colonies. Though the colonies were often established on the lands of the "barbarian" Skythians and Thrakians, the colonists generally seem to have set up trading relations with the natives. From these Greek outposts Miletos received timber for its fleets, metals for coins and other useful implements, and other trade goods and staples such as grain. Ionians traders, probably Milesians among them, journeyed far overland as well.

The writings of Thales, Hekataeos and other Milesians of the city's glory days are mostly lost. Probably they would have had much to tell us about the earliest days of coinage. The oldest extant Greek history, by Herodotos (c. 484-425 BCE), has precious few things to say about coins. His book does provide invaluable information about the period from about 700 to 480 BCE, when many Greek cities were ruled by tyrants. Herodotos didn't much care for them, typified by his story about Thrasyboulos of Miletos, who by 600 BCE had become a friend of Lydia, a non-Greek empire that was ruled by a dynasty of tyrants bent on imperial expansion. Thrasyboulos advised an emissary of the tyrant of Korinth that maintaining power required the periodic execution of leading citizens.

Modern commentators offer dictator as a synonym for tyrant. Tyrants seem to have considered themselves kings, based on their merit more than the randomness of aristocratic inheritance, though they weren't above attempting to establish dynasties. Tyrants sided with the emerging merchant class and sometimes with the working class, many of whom must have been dirt poor, perhaps even debt slaves. Earlier tyrants promoted commerce and public works, and they almost certainly were responsible for the adoption of the monetary concept of coinage. Later tyrants

apparently were obstacles to democracy. While Thales wrote a letter expressing contentment with life under Thrasybulos, his pupil Anaximander (c. 610-540 BCE) wrote a later letter that complained of oppressive tyrants. Most tyrannies would give way to democracy, but often of a sort that was dominated by the wealthy.

The first coins of western Afro-Eurasia—Herodotos didn't see why the single landmass was divided into three continents and neither do I—were electrum. Also called pale or white gold, electrum is a natural alloy of gold and silver that was commonly found in the rivers of Lydia, and it is also a manufactured alloy of the two metals, sometimes mixed with copper. Tye, Robert Mundell, and Christopher Howgego offer abundant evidence for the contention that sixth century BCE electrum coins were made generally of a manufactured alloy, not natural electrum.

Colin Kraay's generalization that the ancient Greeks didn't debase their coinage except during dire crisis doesn't apply to the sixth century BCE. This was the first century of a new idea for the Greeks, coinage. There were billon coins, copper mixed with enough silver to give a silver appearance, at Lesbos and Kyzikos. Barbel Pfeiler, whose 1966 work on the denomination set of ancient Miletos is still important and is now available in translation, noted that Milesian silver coins were often less than pure silver, and she theorized that coins of high purity were suitable for international trade while those of lower purity served for local exchange. Most important was electrum, wherein the alloy of gold to silver could be discreetly debased, in the words of Tye, from a nominal 70 or 80 percent gold down to 55 or less percent. Because the debased coins were valued as if they mostly to purely gold, they were 25 to 45 percent over-valued, thus yielding a large profit to whoever commissioned their striking, be it tyrants or favored others.

Howgego and others feel that Greeks might have coined before Lydians. I go along with the majority of numismatists who believe the Milesians first coined a decade or so after the Lydians, around 600 BCE. It was probably Thrasybulos who instituted Milesian coinage after allying with the tyrant of Sardis, who as king of the Lydian Empire had the power and prestige to enforce a monetary regime of debased electrum coins in place of the traditional gold and silver bullion. The Ephesians began coining electrum around the same time as the Milesians, maybe a bit earlier. Other Greek cities of the eastern Aegean coast soon took up the idea, using their own designs, usually including the badge of the city, such as the lion of Miletos. Perhaps individuals had coins struck with their own designs as well. Kraay, whose 1976 reference on pre-Alexander Greek coins remains essential, suspected that rulers used their own personal devices on the earliest coins. This would have included tyrants.

Though the Ionians conferred regularly at their *Panionion* (meeting place of the Ionian League), which was on a promontory between Miletos and its rival Samos, there doesn't seem to have been a pan-Ionian federal coinage. Generally there were three different weights for electrum staters or shekels in Ionia, another example of the diversity of the country. The Milesians and the majority of Ionian cities used the Lydian standard for electrum, but tripled the size of the largest Lydian coins, to a stater of about 14.2 grams. Perhaps these cities had a coinage league: if so, it may have included Greek settlements in Karia, the mountainous coastal land just south of Ionia.

Stater was the Greek word for the most valuable coin, the standard coin. Shekel was the very ancient Middle Eastern term for a specific weight as well as a monetary value or unit of account, and much later, a coin denomination. The smallest electrum coins were the 1/96th Milesian staters of 0.15 grams, and quite possibly a 1/192nd stater of 0.07 grams. These were tiny, but they weren't really small change for the poor. A 0.15 gram electrum coin would have been worth as much as two grams of silver, perhaps a day's wages for some kinds of work. Though Kraay wasn't wrong in asserting that electrum coins were not suitable for small retail purchases, Tye is probably closer to the truth in pointing out that they would have served for large retail purchases and especially as payment of accounts, for say a week's room and board. However, even a 1/24th stater of 0.6 grams would be easy to lose, and it would have been a small fortune—like dropping a hundred-dollar bill today.

Ionian prosperity seems to have continued after the Lydian Empire under Kroisos (Croesus, c. 561-547) finally conquered Ionia by about 555 BCE. The Lydians, Herodotos believed, first introduced silver and gold coinage and retail trade. Some scholars think that silver and gold coinage is a reference to electrum, and probably all would agree that the historian was wrong about retail trade. Be that as it may, the consensus is that the abandonment of electrum occurred under Kroisos by about 550, before the Greeks began coining silver and before the Persian conquest of Lydia. Note that Herodotos, in an oft-overlooked passage, has Kroisos giving presents of gold staters—probably coins—to the men of Delphi upon hearing what he takes to be a favorable oracle. Less clear is why the Lydians, at the peak of wealth and power, would have done away with the profitable electrum coinage, and that question probably underpins the suggestion by some that the Persians were the ones who actually first produced coins of gold and silver. Those who hold to the Lydians have suggested that gold coins paid for mercenaries, who didn't want electrum, and that silver and gold coins were more acceptable to Greek traders outside Ionia. Another possibility is that Kroisos wanted to expand retail trade, or perhaps make it based more on coin than barter. The smaller denominations that could be produced from silver, with an intrinsic value perhaps 1/10th the same quantity of electrum, might have been useful for taxation, as well. In any event, the Lydians didn't suppress Ionian coinage, but their switch (or the Persians') to silver and gold apparently affected it profoundly. Most of the mainland Ionians do seem to have adopted silver coinage shortly after 550 BCE, apparently dispensing with electrum altogether.

Sometime during the period 550 to 510 Miletos began striking silver coins. Exactly when is controversial. Robert J. O'Hara, one of the current experts on Milesian coinage, favors an earlier date; in this he agrees with Pfeiler. A development of paramount importance around this time was the adoption of silver coinage by the leading Greek city-states of the western Aegean, especially Aigina.

Certainly 550 BCE is a possibility for the beginning of an extensive silver coinage in Miletos, but a later date is just as likely. There may not have been much use for coinage earlier, especially small change, as the city seems to have been plagued by civil strife—widespread ruin and a desolated countryside for two generations, says Herodotos. This perhaps began before the Lydian victory over Ionia, worsening after the Persian conquest of both Lydia and Ionia by 545 or so, even though Miletos escaped the worst of the repressions by allying with Kurush (Cyrus) the Great.

Disorder would have continued during the tyranny of Polykrates of Samos (c. 535-522), who seems to have raided Milesia in an attempt to add to his Aegean empire. Order, if not justice, was restored only at some point early in the reign of Daryavush (Darius) the Great (522-486). Though his reasoning depends more upon Persian restrictions on trade with the east, Michael Mitchiner (2004) prefers a later date for the beginning of Milesian silver coins, closer to 520, maybe even later.

The end date for the city's first series of silver coinage is more certain. After 494 BCE few people were left in Miletos, as the Persians under a general of Daryavush killed or exiled the city's inhabitants—the practice was not unusual among the Greeks, I infer from Thucydides—for leading the Ionian Revolt of 499 to 493 BCE. Though ultimately a miserable failure, this insurrection early on met with some success, as the rebels burned Sardis, seat of the Persian satrap's government. Called Ionian, the revolt actually involved most of the eastern Greek cities, from Byzantion (Istanbul) in the north to Rhodos, Karia, and Cyprus in the south, as well as Athens for the first few years.



Silver 9 mm 1.1 g 1/12th stater, lion head right / star, Sear 1979 #3533

Based upon stylistic similarities to the coinage of Kroisos of Lydia, Pfeiler proposed that the lion and star coin of Miletos was first struck around 550 BCE. My lion and star, pictured many times its actual size of 9 millimeters, falls into Pfeiler's group II, which includes an extensive silver coinage first struck no earlier than 525. This dating, adopted by both Sear and Tye, has the additional merit of fitting the fragments of history that have survived. It was the late sixth century, according to Herodotos, that Miletos reached the height of its prosperity and glory.

Most numismatists seem to agree that the value was a hemihekte or twelfth part of the 14.2 or so gram silver stater. With a theoretical weight of about 1.2 grams, the lion and star coin was among the most valuable of the Milesian silver denominations. Working class people would have considered these small twelfth staters far too valuable to lose. A poor person would have been ecstatic to have one. Extrapolating from a hypothesis by Mitchiner (2004), one lion and star might have normally been worth something like four meals at an inn. It would have gone far in the city's markets.

My coin came from an English trading pool. Before that, who knows? Milesian hemihektai have been found in hordes in coastal areas from Egypt to Turkey and a few scattered areas of Greece. No doubt there have been numerous stray finds as

well. The Egyptian hordes establish that these coins were first struck no later than 500 BCE. Some have argued that the only substantial sixth-century BCE coinage was from the island-state of Aigina, near Athens, but the Miletos lion and star seem to be much more available from dealers, at a much lower price than Aiginetic coins. Tye reckons that they were struck in “huge numbers.”

While Miletos had no silver mines, the Milesians traded for silver from Siphnos in the Aegean Islands before 525, from Thrake and Makedonia, and probably from points east. Tests such as lead-isotope analysis have been devised to pinpoint where silver was mined, but results are difficult to interpret when metal from many places is melted as the first step to produce coins. In any event, I’m unaware of such tests done on the earliest Milesian silver coins.

Regardless of where the metal came from, my coin may have started its life as a planchet (or blank) that was cast in a round mold. When struck once or more by a punch and hammer, the planchet, which was set atop a die in an anvil, became an angularly round flan. Alternatively, perhaps the planchet was cut from a cylinder of silver bullion. While three or four twelfth staters could sit comfortably on a sixpence or dime, these coins are thick, often weighing half as much as a dime. None of the other Greek silver fractions in my collection are near as thick.

Mitchiner (2004) suggested that extant specimens range from 8 to 10 mm and 0.9 to 1.3 grams, with at least one outlier at 0.75 grams. This is a large range of weights for a single silver denomination. Some have theorized that the lightest coins were trihemibols. In old references the heavier weight indicated a diobol, and the lion and star wasn’t minted until about 480 BCE. We now know that this coin began to be struck decades earlier, and few modern numismatists favor interpreting the Milesian denominations as obols, multiples, and fractions. Mitchiner seems to allow that this might have become the structure by the time of the Ionian Revolt, however. To further complicate matters, a very few 0.6 and 0.3 gram lion and star coins are known. Perhaps, as O’Hara suggests, they were Karian imitations.

The standards for weight may not have been very rigorous, maybe even shrinking over time. In Herodotos we hear the advice of Hekataeos, no doubt the same Hekataeos the historian, to the Milesians plotting the revolt against mighty Persia: if you must revolt, then expropriate the vast treasury of the temple at Didyma to pay for the necessary ships. Some of this was bullion deposited decades earlier by King Kroisos. The plotters refused, fearing Apollo more than Daryavush. This plausible story could be taken as evidence that the Milesians inflated the economy to a war footing by deviating low from theoretical weights for silver coin. On the other hand, most numismatists believe that the Ionians revived electrum during the revolt, and that electrum would no doubt have been over-valued. Silver-plated *fourées* also exist: counterfeits, perhaps, or yet another means to finance the ambitions of the Milesian war party.

As with many ancient Greek and hammered coins, the obverse is the side with the higher relief design. The obverse theme of most, maybe all, the earliest Milesian silver denominations was the lion, which was the badge of the electrum and then the gold and silver coinages of Lydia and was prominent on Milesian electrum coinage early on. In fact, the lion was a popular motif for many Greek cities’ early coinage.

The obverse design for my coin is the forepart of a lion left with the head turned backwards or right. On my coin there is indeed something that looks like the lion's paw below the head, but it's not enough to give a sense of the complete design. Milesian twelfth staters from this period are also found with the lion's head left, which some say is more common than head right, though Sear's valuations implied the opposite.



The standard description of the reverse has been four flowerets around a central pellet, all within an incuse square. Some have said that the reverse of this coin was the result of a punch rather than a die, but the distinction seems not that important here. Simply put, a die was meant to impress a design upon the entirety of the planchet, as on the obverse of this coin, while a punch wouldn't cover the whole surface. In any event, a reverse design was set into the punch that was struck by hammer once or twice against the planchet. On this coin the reverse strike was a bit off center, the metal

swelling up on two sides. With such a small blank to work with, workers producing the coins would have made many imperfect strikes.

Recent opinion tends toward seeing the reverse theme as the sun or some other star, as Kraay proposed, rather than flowerets. When I turn my coin over at 3 o'clock, instead of randomly to match the photo in Sear's catalog, I see a stellate pattern. Apollo, patron of Miletos, was the god of light. Interestingly, Kraay called the lion the "beast of Apollo," which he thought was meant to be understood as roaring at the flaming disc on the reverse. Stating that I turned my coin over at 3:00 is not a suggestion that the Milesians had some kind of regular die rotation; only the analysis of many specimens could establish such a thing, for which the current evidence is a practice beginning in Phoenikia about a century and a half later.

Mitchiner (2004) agrees with Pfeiler, who suggested another major sub-type, a stylized or abstract depiction of both the lion (which may be either right or left) and the star (not flowerets). From his photos the abstraction seems easier to detect on the reverse. In any event, the engraving done for dies for this coin is much better quality compared to the earliest Greek coins, though nowhere near the work of art as the contemporary coins of Greek Sicily.



Like most of the earliest Greek coins, neither the obverse nor the reverse has an inscription. This has made attribution of the smallest coins of the era a difficult task. O'Hara does note that some of these hemihektæ appear to have an M on the reverse. However, the rare presence of identifying inscriptions on the oldest coins, the scarcity of hordes, the widely varying weights for a given coin type, and the loss of historical sources can only result in a poorly understood denomination structure (or *d-set*) of the earliest silver coins, Milesian or otherwise.

Mitchiner proposed a silver d-set from 1/8 to 1/92 stater, referring the interested reader to other works to fill in the blanks from his listings. He seemed to imply that a Milesian would have known the denomination of a coin from the reverse design. A four-pointed star within an intricate square lattice was an eighth stater; the lion's head was also facing. Lion in profile and star was a twelfth, Gorgon a 1/32nd stater. Apollo was a 1/48th stater, an eagle (?) a 64th, and a quail, on a 5 millimeter flan, was 1/96th stater. See also the www.wildwinds.com listings for Miletos, some of which have attributions that disagree with this. O'Hara doesn't list the Apollo as Milesian, which Mitchiner admitted has also been attributed to Karia. Mitchiner also hypothesized that the 1/8, 1/32, and 1/64 denominations came about from mainland Greek influence, struck later than the "Asian" denominations that were divisible by twelve.

O'Hara notes that Miletos may have had up to nine silver denominations throughout the 50 or more years of the first issue of Milesian silver, though he warns of uncertainties due to Karian copies of Milesian coins and alternative attributions to other Ionian cities. Noting that some Milesian coins appear to have been struck to a weight standard different from the 14.2 gram stater, he also stressed that not all denominations would have been coined at the same time. Regardless, he proposed a d-set or d-sets suitable for fairly large down to the smallest of purchases: 1/8, 1/12, 1/16, 1/24, 1/32, 1/48, 1/64, 1/96, and even 1/192 staters. That last weighs about 0.07 gram. One possible objection to this is different denominations sharing the same obverse and reverse. Even if the 0.3 gram roaring lion and bird 1/48th stater was issued at a different time from the roaring lion and bird 1/96th of half that weight, why would the Milesians use the same theme for two close and tiny-flan denominations? And if the denominations were struck at the same time, how would a Milesian know for sure that one coin was worth twice as much as the other? Again, another possibility is that there was a Miletos-dominated coinage sphere, perhaps a fairly extensive area of the southwest Turkish coast, where coins of similar themes but different weights would not normally have met one another.

O'Hara acknowledged a large debt to Pfeiler but departed significantly from her proposal for a Milesian silver d-set. She believed that Miletos coined 1/12th staters from 550 to 494 BCE, which were supplemented by 1/48th and 1/96th staters from 525 and 1/64th staters after 500, and that the mainstay of coinage continued to be electrum.

Strangely, the Milesian standard silver stater of about 14.2 grams apparently was never coined by any Ionian city. One candidate, proposed by Barclay Head a century ago, almost certainly was Karian. The largest extant Ionian denomination was a 7 gram coin, rather rare, of Klazomenai, at the northern end of Ionia. If the Persian half-shekels (called sigloi by the Greeks) that were probably minted at Sardis circulated in Ionia, then a 1.1 gram lion and star might have been intended to pass as a fifth, for example. Perhaps too the silver shekel of Ionia was more a weight for bullion than a coin, and bullion was still an important form of money in the late sixth century BCE, as John Kroll and Henry Kim have argued. Alternatively, Pfeiler may have been correct in asserting that ten of the silver lion and stars exchanged for one electrum twelfth stater. Possibly, all these things were true.

As of 2010 archaeological excavation has been in progress at Miletos for a number of years. Perhaps new finds will shed light on the complex structure of denominations.

On the other hand, information about coin hordes found since the early 1970s and reinterpretations of older hordes is expensive to acquire. Documentation of stray finds of smaller denominations seems like an impossible dream.

Although this is the only coin of Miletos in my collection, the city minted autonomously for many centuries, under many different overlords. A new city may have been built as early as 480, but the Milesians seem to have resumed coinage in earnest only around 400 BCE, maybe later. Ironically, by this time Miletos was under the control of the Persians again, who had been ceded the Greek cities of Turkey by the Spartans after their victory over Athens, which had earlier liberated these cities from the Persians but soon prohibited them from coining. The design of the 1/12th stater was copied by Persian satraps for their own silver coinage, this time with the addition of two or three-letter initials identifying them personally. Miletos was a royal mint for Alexander the Great and perhaps four of the successors who contended for the throne of Makedon. The Milesians continued to use the theme of Apollo, lion, and star on both silver and bronze issues until the city, called Miletus by the Roman overlords, ceased coining shortly before 250 CE, by which time the silting of the harbor was well under way.

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