

Through the Ages

Athenian Owls

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Athenian Owls, thick, heavy, high-relief silver coins minted more than 2,000 years ago, were arguably the most influential of all coins, and the Classical Owl tetradrachm, pictured above, is the most widely recognized ancient coin among the general public today.

Owls were the first widely used international coin. They popularized the practice of putting a head on the obverse of a coin and a tail (animal) on the reverse. Owls were handled by Pythagoras, Xenophanes, Democritus, Hippocrates, Socrates, Plato, Aristotle, Euclid, Archimedes, and others whose thinking formed the very foundation of Western civilization. They remained thematically unchanged, Athena on the obverse, her owl on the reverse, for half a millennium, through great changes in the ancient world. Because of their centrality, they were known as "Owls" in ancient times as they are today despite many other ancient coins depicting owls in an equally prominent fashion. President Theodore Roosevelt used a Classical Owl as a pocket piece, which inspired him to order the redesign of U.S. coins early last century.

Like other great powers, Athens treated its money not only as a way of facilitating commerce and trade and projecting its image abroad but also as a way of making money. Athens earned seigniorage profits on each Owl minted, whether the source was freshly mined silver or the silver coins of other cities. The traders and merchants of other cities, in turn, liked Owls because of their easy exchangeability. Owls thus became the world's first great trade currency, and they were followed in this role by among others Alexander the Great tetradrachms and staters, Roman denarii, Spanish American pieces of eight, Dutch lion dollars, Austrian Maria Theresa thalers, and American dollars.

The mythology depicted on Owls is equally interesting. Athena was goddess of both wisdom and warfare, combining within herself two qualities we find incompatible today but the ancients didn't, a telling difference between their world and ours. She was the patron goddess of Athens, one of the greatest cities of all time.

According to ancient Greek mythology, Athena was the daughter of Zeus and his first wife, Metis, whose name meant "wisdom." Metis warned Zeus that their first son would be more powerful than Zeus himself, which agitated Zeus so much that when Metis became pregnant he swallowed whole Metis and their unborn child. This gave him a

headache, which he cured by splitting his head open with an axe. (Zeus may have been powerful but he wasn't necessarily smart.) From the wound came forth Athena, fully grown.

One of Athena's precursors was the Eye Goddess of Neolithic peoples. The wide staring eyes of the Eye Goddess were all-seeing and all-knowing. Along with being the goddess of wisdom and warfare, in ancient Greece Athena was also known as an eye goddess and was described as the "flashing eyed." The large almond-shaped frontal eye on early Owl coins may thus have religious significance. Some disagree, pointing to Attic and Egyptian art and pottery of the same period with the same frontal eye on human figures.

The owl is Athena's attribute or mascot. According to the mythology, Athena at times also took the very form of her owl. The owl species depicted on Athenian Owls is the Athena Noctua, also called the Little Owl or Minerva Owl. Standing 6 to 8 inches and weighing 2.5 to 4.5 ounces, they range from the Mediterranean to Scandinavia. The owl then as today was a symbol of wisdom. At different places and in different times, however, owls have symbolized other things, including dread and death.

No coin better epitomizes Athens than the Owl, and no city was more central to Greece than Athens. Greece, in turn, was where the foundation of our way of life, the way we think and interact with one another, was built. Our philosophy, politics, education, mathematics, science, medicine, art, theater, architecture, and sport all originated in ancient Greece from relatively inchoate antecedents. The Greeks masterfully developed the very substance of our civilization from what they inherited from Mesopotamia, Egypt, and Minoa.

In contrast, Rome, which surpassed Greece in military success, merely took what it inherited from Greece, and to a lesser extent from Etruria, and imparted more order to it, with relatively little original thought or innovation. Rome was Greece, just more organized with its systematized roads, aqueducts, sewers, and army. There's a reason that Augustus, the first and greatest of Roman emperors, used a figure of Alexander the Great as his personal seal aside from the latter's military success, the same reason Rome granted Athens special status, regarding it as the cradle of civilization. Greece experienced a creative explosion that dwarfed what happened anywhere else through history with few exceptions, such as Sumer, Imperial China, Renaissance Europe, and arguably the post-World War Two United States.

It can be enjoyable to follow Western civilization today back through key contributions by various peoples, allowing for numerous other influences along the way. Admittedly oversimplifying, the Americans gave us the nuclear age, space exploration, and the Internet; the English industrialization; the Renaissance Europeans independent thought and discovery (again); the Romans organization and Christianity; the Greeks science and

democracy; the Lydians coinage; the Babylonians codified law; and the Sumerians how we tell time, the wheel, and writing.

The attraction of Owls, in short, stems from the impossible age of the coins, their beauty, their mythological symbolism, their wide appeal in ancient times, and the fact that they came from where Western civilization originated. Owls may not be considered among the most beautiful of ancient coins, but there's charm in their simple aesthetics. For the most part they're also far from being rare coins, but there's charm as well in their utility, the undeniable reality that they were used and used widely.

What follows is a pictorial story of the Owl through time. The focus here is on tetradrachms, the most common denomination and the largest next to the rare dekadrachms and gold staters. It's the tetradrachms that are known as "Owls." Athenian coins depicting owls were also minted in a host of smaller denominations, including didrachms, drachms, tetrobols, hemidrachms, diobols, trihemiobols, obols, tritartemorions, hemiobols, trihemitartemorions, tetartemorions, hemiartemorions, and bronzes. The smaller fractions, used for everyday market transactions and hoarded less, typically were struck less carefully, circulated more, and are found in worse condition than tetradrachms. Tetradrachms were used as payment to soldiers, in international trade, and for storing wealth.

The Owl silver coinage ended in the middle of the first century BC, but some Athenian bronzes featuring an owl continued well into Roman Imperial times until the end of ancient Athenian coinage c. 267 AD. As you'll see, much later the Classical Owl tetradrachm was widely remembered, and honored, on coinage and elsewhere.

What follows on this page are Owls from all the major periods, coins that were deliberately chosen to illustrate different aspects of ancient coin production, use, and preservation, to what can happen to coins before, during, and after the minting process. On following pages of this site are ancient counterfeits, ancient imitations, ancient derivations, and the many different types of modern copies.



Archaic Owl tetradrachm (16.24g, 22mm), Athens, c. 490-482 BC, Sear 1842v., Seltman Group Gi, Price and Waggoner Group IVg, SNG München 29, Szego 3.

Archaic Owls were the first Owls, minted c. 510 to 480 BC. That the first Owls were issued c. 510 BC, at about the same time as the establishment of Athenian democracy under Kleisthenes, is only fitting.

Owls appeared on Athenian coins before Archaic Owls, on the obverse of some of the Wappenmünzen, which is a German word for "crest money" or "heraldic money." The Wappenmünzen were the first coins of Athens, beginning c. 545 BC and then produced in a multiplicity of different types, and they're traditionally thought to have been issued by different Athenian aristocratic families, each type representing a different family, though it's more likely that these were state-issued coins referring to different religious festivals. It was the addition of Athena to the obverse and the pairing of her image with that of her owl on the reverse that turned Athenian coins into "Owls," with this iconography continuing on Athen's silver coins for nearly 500 years.

All Archaic, Classical, and Intermediate Style Owls (though not New Style Owls, the last Owls) depict on the reverse an olive sprig, sometimes called an olive twig or olive spray. This refers to Athens' large export of olive

oil, which along with silver, pottery, and military success were the main reasons for her prosperity.

Unlike the earlier Wappenmünzen, all Owls feature an AQE ethnic on the reverse, an ethnic being a type of legend identifying a people. The AQE ethnic is sometimes written in English instead as AOE or A-TH-E. The three Greek letters are alpha, theta, and epsilon, with the theta appearing as an O with a dot in the middle and having a TH sound. (In modern Greek theta is represented as an O with a line in the middle, while earlier in Greece it was represented as an O with either a cross or X in the middle). As with most ancient Greek coins, the genitive (possessive) case was used for the legend, so instead of "Athens" it means "Of the Athenians."

Archaic Owls are crudely styled. The above specimen is among those that are better styled, with Athena having a relatively small head, long neck, and fine overall features, though her nose merges unnaturally with her forehead. The numismatist Paul Szego described the styling of this variety as "primitive" but "permeated with the sweet freshness of archaic charm." The above specimen has an obverse struck on a worn die and a flan crack at the edge and near Athena's ear.

The above coin was likely minted after the discovery of new silver deposits at Laurion near Athens c. 483 BC, with the Laurion mines thought to have been first exploited c. 520 BC. The new Laurion silver was used to significantly increase the production of Owls for building up the Athenian navy in preparation of the anticipated Persian invasion of Greece. Laurion silver would later be central to Athens' military, political, economic, and cultural success.

The Greek victory over the Persian fleet at the Battle of Salamis c. 480 BC would determine the subsequent course of Western history. This was an epochal moment, which the historian Victor Davis Hanson called the supreme confrontation between East and West, between despotism and individual freedoms. About Salamis, wrote

the 19th century philosopher Georg Hegel, "The interests of the world's history hung trembling in the balance."

After Salamis the Persian king Xerxes retreated to Asia with the bulk of his army, and the Greeks were able to continue their embryonic, and unprecedented, experimentation with individualism and democracy. For the next three and a half centuries, Greek ideals about constitutional government, private property, free scientific enquiry, rationalism, and separation between political and religious authority would permeate lands from Italy to India, and via the Roman Empire, would spread through Europe and on to us, though not without interruption and regression.

The Battle of Marathon of 490 BC and the Battle of Thermopylae, which took place slightly earlier in 480 BC, are better known to us today, the former because of the heroics of a lone long-distance runner, the latter because of a 2007 Hollywood movie. But the Battle of Salamis was far more momentous.

Classical Owl Type A full-crest tetradrachm (17.05g, 23mm), Athens, c. 454-431 BC, Sear 2526v., Starr Pl. 22 No. 3, Svoronos Pl. 11 No. 7.

Classical Owls, sometimes called an Old Style Owls, were introduced c. 478 BC and likely continued to c. 393 BC. In contrast to Archaic Owls, Athena's helmet on Classical Owls is decorated with a floral scroll (flowery design), sometimes called a palmette (stylized palm leaf), as well as three olive leaves, and the reverse includes a crescent moon. Like a wreath of triumph, the floral scroll probably refers to the Greek victory over the Persians, though some regard it as merely decorative. Some regard the crescent moon as merely referring to owls' nocturnal activities. Others believe it refers to the Battle of Marathon, though this battle took place during a full moon. It more likely refers to the Battle of Salamis, which was more decisive and took place shortly before the addition of this feature to Owls. As with Archaic Owls, the reverse includes an olive sprig.

The above coin is a Mass Classical Owl, sometimes called a Standardized Owl (though they're far from completely standardized) or a Conventionalized Owl. Mass Owls are both the most common and most celebrated of Athenian Owl tetradrachms. Compared with most Early Classical Owls, sometimes (confusingly) called Transitional Owls, on Mass Classical Owls Athena's hair sweeps across her forehead in one series of parallel curves, the owl's head is straight and body long, and the owl's tail feathers end in a single prong rather than appearing as separately delineated feathers.

As with all Classical and Archaic Owls, Athena retains her archaic frontal, more or less almond-shaped eye. This anachronism, which happened despite the introduction of perspective and realism on coins elsewhere in Greece at the time, was no doubt a deliberate means Athens used to retain the easy recognizability and acceptance of Owls as money throughout the known world and the profits it earned from minting them. As on other Classical Owls, Athena wears what's typically described as a necklace and an earring. But the necklace is actually the top of her aegis, or breastplate, which extends from her shoulder to her neck and which is not always on the flan, as with the above specimen. The earring in turn is likely a hinge used for connecting the helmet to the aegis.

Unlike with the vast majority of Classical Owl tetradrachms, the horse-hair crest of Athena's helmet on the above specimen is still on the flan. Most Classical Owl tetradrachms have flans that are too small for the coin's full design. Because of their relative scarcity, full-crest Owls can carry a substantial premium in the marketplace today.

The above specimen is a beautiful, well-centered coin without any major problems, easy to look at. But it's not perfect. A slight amount of wear is visible at the highpoints on the center of the obverse (Athena's hair) and reverse (owl's wing). There are small digs at Athena's hair and in the floral scroll. The aegis at Athena's neck is mostly off the flan. Finally, die wear on the reverse is evident with the AQE ethnic and the owl's feet.

Despite the popularity of Mass Owls, their dating and attribution is one of the great underexplored areas of ancient numismatic scholarship. Chester Starr in 1970 called this area a "wasteland" and said a die study of these coins, because of their sheer numbers, would be a "terrific labour." Peter van Alfen in 2009 described Mass Owls as "notoriously untrainable issues." Because of the number of dies used, David Sear told me in a 2009 email interview that he hasn't found a single die match over the years involving any of the Owls sent to him to authenticate with the specimens published in *Corpus of the Ancient Coins of Athens* by John Svoronos (completed after the author's death by Behrendt Pick and translated into English by L.W. Higgin in 1975), which illustrates more Mass Owls than any other published reference. Some scholars

and dealers, however, have attempted to more narrowly date Mass Owls according to style.

Mass Owls are most commonly dated c. 449 to 413 BC, in the U.S. at least. That's how Sear dated them in his 1978 standard *Greek Coins and Their Values*. But new hoard evidence has surfaced since then suggesting that different dating may be more appropriate.

The 449 date comes from the Athenian Coinage Decree, which sought to force Athens' allies to use Athenian coins, weights, and measures and which at one point was thought to have occurred c. 449 BC. But over the past half century the body of evidence and opinion has lowered the dating of this decree to c. 425 BC or even as late as 414 BC. Further, hoard evidence suggests that the minting of the Early Classical Owls ceased sooner than previously thought. Consequently, more numismatists now regard the minting of the Mass Owls to have started earlier than c. 449 BC. John Kroll argued for a date of c. 454 BC, corresponding to the move of the Athenian League treasury from Delos to Athens, in his 1993 book *The Athenian Agora, Vol. XXVI: The Greek Coins the Athenian Agora* and his paper "What About Coinage?" in the 2009 book *Interpreting the Athenian Empire*, edited by Ma, et al. Christophe Flament used the date c. 460 BC in his 2007 book *Le monnayage en argent d'Athènes*. I'm using the c. 454 BC date.

The 413 date comes from Sparta's disruption that year of the operation of Athens' silver mines at Laurion during the Peloponnesian War, which Athens would eventually lose to Sparta with the aid of Persia c. 404 BC. But there's no proof that Athens totally stopped minting its silver coinage afterward, and the evidence argues that minting continued, with Athens continuing to profit from the melting of other cities' silver coinage and the restriking of it into Owls and with other cities continuing to use the widely accepted Owls, including Sparta, Athens' enemy. No doubt, however, the number of Owls minted dropped considerably after c. 413 BC.

Colin Kraay in his 1976 book *Archaic and Classical Greek Coins* contended that the production of Owls virtually ceased from c. 411 to 407 BC and totally ceased from c. 406 to 393 BC, with the 393 date corresponding to the arrival of a large influx of Persian money as Athens regained its independence and democracy, which is the most commonly used date for the initiation of the profile-eye Intermediate Style Owls of the fourth century BC. Kroll, on the other hand, argued that Owls continued to be minted during this period, with the Emergency Issue silver-plated fourree tetradrachms struck c. 406 to 404 BC intended for internal use only. Flament used c. 404 BC as the terminus date. I'm using the date c. 393 BC.

As evidence of the lack of agreement, the dating of Mass Owls by dealers and auction houses is all over the place. In some cases Mass Classical Owls are grouped in the same

category as Early Classical Owls, leading to an earlier start date. The dating includes but is undoubtedly not limited to the following: c. 449-413 BC (after Sear), c. 460-404 BC (after Flament), c. 479-393 BC (after SNG Cop.), c. 454-404 BC (after SNG München), c. 480-400 BC (after SNG Delepierre), c. 449-404 BC (after Dewing), after c. 449 BC (after Starr), c. 490-430 BC, c. 479-413 BC, c. 454-415 BC, c. 449-393 BC, c. 449-410 BC, c. 449-415 BC, and c. 448-415 BC.

Some auction houses break down the dating of Mass Owls very narrowly based on style, giving them dates, for instance, of c. 440 BC, c. 435 BC, c. 430 BC, c. 425 BC, c. 415 BC, and c. 410 BC. Paul Szego made some interesting observations about the stylistic transition of Mass Owls in a January/February 1942 *Coin Collector's Journal* article, and Svoronos illustrated this transition well, though his dating of c. 431-359 BC is too late. Flament divided Mass Owls into three groups, c. 460-440 BC, c. 440-420 BC, and c. 420-404 BC, based on style, not die, analysis.

I earlier did a similar stylistic analysis. What I've noticed from looking in collection and auction catalogs and in person at untold numbers of these coins, as well as those that preceded and followed them, is that the Mass Owls that were likely issued earlier, compared with those issued later, tend to have the following characteristics:

- Athena has a wider, smiling mouth that can appear as a smirk rather than a short mouth that's neutral in affect or that curves slightly downward, forming a frown.
- Athena has a more protruding rather than a flatter face.
- The eye of Athena is smaller and more symmetrical, with the curve forming the upper half mirroring the curve forming the lower half, rather than the two sides being asymmetrical.
- The floral scroll on Athena's helmet is smaller rather than larger.
- The owl has shorter rather than longer claws.
- The ethnic consists of smaller rather than larger letters.
- The incuse square is more clearly visible on the coin's flan rather than being off it.

The above follows from the logic that earlier Mass Classical Owls, perhaps issued between c. 454 and 431 BC, with the date 431 BC corresponding to the beginning of the Peloponnesian War, are more similar stylistically to Early Classical Owls minted between c. 478 and 454 BC. With the huge numbers of Mass Owls minted, with the many different dies used, and with the many different die engravers likely used, there are no doubt plenty of exceptions to the above generalities, and there's nothing that appears remotely conclusive to date Mass Owls to specific decades.

Perhaps the most interesting difference between the earlier and later Mass Owls is that

with the later issues Athena has lost her confident smile. These later Owls were likely minted during the Peloponnesian War, which Athens lost. On subsequent Intermediate and New Styles Owls, Athena would never regain that confident smile, just as Athens never regained her preeminent position in the Greek world, at least militarily.

The subtly smiling mouth, close to symmetrical eye, and longer face of the above specimen suggests it's an earlier Mass Classical Owl, minted during the height of Athenian power to finance the building of the Parthenon and other projects. Based upon the smile, I'm calling varieties such as the above specimen Type A. Mass Owls have the distinction of being used to help build Athens into a great city through the financing of the Parthenon and other building projects and later to help destroy its supremacy through the financing of the disastrous Peloponnesian War.

Owls for the most part weren't used for everyday commerce because their buying power was far too high. Compared with smaller fractions, they show up infrequently in archeological excavations in the Athenian agora, or marketplace. They were used in Athens instead for large transactions such as building projects, payment for war supplies and personnel, and international trade. As international trade coins, they were also used by other cities for the collection of tribute and taxes and by traders and merchants for large commercial transactions.

Owls were employed heavily in international trade, but they weren't the first coins accepted across international borders. That coin would have been the Aegina Turtle. Athenian Owls, however, were minted in far greater numbers, traveled much further, and were imitated all over the known world at the time. The coins that replaced the Owl as the most commonly used international currency were Alexander the Great's silver tetradrachms and gold staters, which in turn were replaced by the Roman denarius.

Mass Classical Owls differ stylistically in other ways besides the differences spelled out above. Some specimens have a lock of hair in front of Athena's forehead, a pronounced dot on the owl's forehead, a theta without a central dot, or an A with a tilted rather than straight crossbar.



Classical Owl Type -- full-crest tetradrachm

(17.12g, 26mm), Athens, c. 454-404 BC, SNG Cop 32ff, Starr Pl. , Svoronos Taf. 1216.

Gorny & Mosch Auk 273, lot 147 Nov 19,2020

description by Gorny & Mosch as the original picture here of a full crest tetradrachm was missing

As with the previous piece, this is a full-crest Owl. Three of the 160 Mass Owls documented in Svoronos (plates 11-17) and four of the 87 Mass Owls documented in Flament's tables have a full crest.

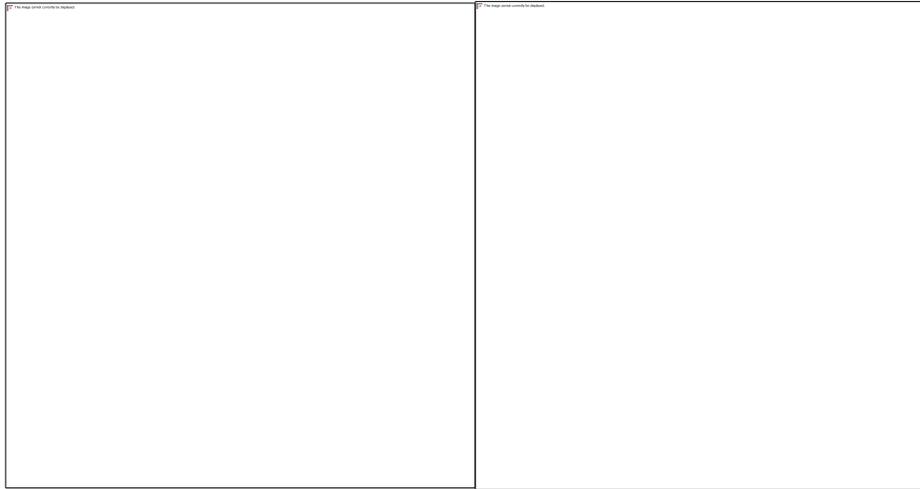
The above two specimens both exhibit a break in the crest at the spot where the horse hairs transition from pointing upward to pointing downward. Of the Mass Owls that exhibit a full or partial crest, almost all show such a break when enough of the crest is on the flan. But a small minority of published specimens don't, with the horse hairs protruding in a continuous fan. Examples of full- or partial-crest Mass Owls without a crest break include Svoronos Plate 13 No. 8, Svoronos Plate 14 No. 9, SNG Lockett 1842, and Pozzi 3470. Many die cutters of modern originally engraved forgeries of Mass Owls portray the helmet crest as a continuous fan of horse hairs, with no break. The possibility exists that the published specimens without such a break are as yet unconfirmed modern forgeries.

With the above specimen, as with most full-crest Owls,

another part of the obverse design is either truncated or crowded against the edge, typically the nose or the chin or both. It's unclear why the ancient Athenians, originators of democracy and individualism, couldn't figure out how to coordinate the size of their coin dies and the size of their coin flans for there to be enough space for the entire coin design. This piece also exhibits three test cuts on the reverse. Unlike most test cuts, however, these appear to be carefully placed, from the edge inward and fairly equally spaced.

The helmet depicted on all Owls is an Attic helmet, sometimes called an Athenian helmet. The other most commonly seen helmet on ancient Greek coins is a Corinthian helmet, which appears on among others Alexander the Great gold staters and Corinthian silver staters (there's longstanding debate over whether Corinthian staters depict Athena or Aphrodite, though the figure on these coins is typically referred to as Athena and most likely is). The Attic helmet had a hinged visor that's pulled up on Owls but could be dropped down for protection of the face during battle. The side of the visor is visible on Owls as a band above Athena's hair. The Corinthian helmet, on the other hand, was designed to be pulled down over the face, having slits for the eyes visible in the helmet as well as a nose piece. On most ancient coins the Corinthian helmet is worn pulled back with the face exposed, while with some such as Mesembrian diobols and other less commonly seen Mesembrian denominations of the same period it's worn pulled down over the face.

Among other coins depicting an Attic helmet are electrum staters of Kyzikos (Sear Greek 3478) and Seleukos I tetradrachms portraying Alexander/Seleukos I (Sear Greek 6833). Along with the Attic and Corinthian helmet, also depicted on ancient Greek and Roman coins is the Phrygian helmet, appearing on, for instance, coins of Velia (Sear Greek 455). Other helmets used in ancient Greece included the Illyrian, Chalcidian, Thracian, and Macedonian, among others.



Classical Owl Type A test-cut, countermarked, and corroded tetradrachm (16.62g, 27mm), Athens, c. 454-431 BC, Sear 2526v.

As with the previous two pieces, this is also a full-crest Owl. But it may be the ugliest Owl I've ever seen. Its surfaces exhibit significant wear, from use in ancient times, and severe corrosion, from how the coin has reacted to its environment in being buried for 25 centuries, which combined nearly obliterate the coin's detail. The coin apparently was found with the silver toned completely black and was partially cleaned, with the original silver sulfide toning visible as ugly black splotches in the recesses and corrosion pits. Two test cuts, on obverse and reverse, plus a reverse countermark further mar the surfaces.

Yet there's interest in the ugliness, with this coin exemplifying well what time can do. And there's other interest as well. With this full-crest Owl, having an obverse type struck on a flan that's wide enough to include the complete crest of Athena's helmet, Athena's head is still well centered, with all of her facial features still on the flan. As with the previous two Owls on this page, Athena's has a wide, smiling mouth, indicating this is likely an early, less common Mass Classical Owl. The countermark has a "skew" pattern, with two long lines and third short line dividing the space into five compartments, identical to the design inside the incuse square of late archaic and classical Turtles of Aegina of roughly the same period, and it may indicate that this coin was countermarked there. Thanks to fellow collector John Tatman for pointing this out.



Classical Owl Type A test-cut tetradrachm (16.91g, 24mm), Athens, c. 454-431 BC, Sear 2526v., SNG Lockett 1841, Szego 13.

The Owl pictured above, like most Classical Owls, is missing most of Athena's helmet crest, though what is visible is the top of Athena's aegis at her shoulder and neck. Like many Owls, this piece was test cut in ancient times with a hammer and chisel to authenticate it, making sure the interior was silver and not bronze or another base metal. This specimen was test cut twice, with the cut at 9 o'clock having cracked the flan. The crack is most visible on the obverse, but it has also connected the two test cuts on the reverses.

Test-cut Owls can be had on the marketplace at a considerable discount, generally anywhere from 15 to 50 percent of the cost of a coin not test cut. They're damaged coins -- damaged in ancient times -- but they can still retain much interest and eye appeal. Athenian Owls are the single most commonly seen test-cut ancient coins. This specimen is very well preserved, indicating it was likely hoarded shortly after it was minted and test cut and experienced little or no wear due to circulation.



Classical Owl Type B test-cut tetradrachm (17.12g, 25mm), Athens, c. 454-431 BC, Sear 2526v., SNG München 52, Davis 143, Szego 14.

Athena's frowning lips represent the second of three major varieties of Mass Athenian Owls, according to my observations, and I'm calling it Type B. I'm dating these, as well as my Type C Owls, c. 431 to 393 BC.

This Owl depicts another potential result of test cutting. Along with cracking or breaking a coin, a test cut can flatten it on the opposite side. On this coin, Athena's eye and cheek have been flattened. To prevent this from happening, what likely happened with the majority of test-cut coins is that they were first placed on a shock-absorbing surface such as an animal skin.

The test cutting of ancient coins doesn't lead to the loss of any appreciable metal, just its displacement. This specimen, for instance, is full weight, more than 17.0 grams, despite the sizeable cavity caused by the cut. What happens during a test cut is technically called "plastic deformation." The metal at the surface is moved by the pressure of the strike in the same way digging a knife into a stick of butter will move the butter to the sides of the cut, only with test cutting more force is required.

The majority of Mass Classical Owls weigh from 17.0

grams to 17.2 grams, while the great majority weigh from 16.5 grams to 17.2 grams. Of the 118 nonplated Mass Classical Owls with more than a fair chance of having been minted in Athens rather than being of Eastern origin that are documented in Svoronos along with their weights, 72.0 percent are between 17.00 grams and 17.20 grams, while 85.6 percent are between 16.50 grams and 17.20 grams. (Svoronos lists more specimens as being of Athenian origin, but some are in all probability of Egyptian or other Eastern origin.) On the other hand, 10.2 percent are above 17.20 grams, with the heaviest weighing 17.40 grams, 17.8 percent are below 17.00 grams, and 4.2 percent are below 16.50 grams, with the lightest weighing 16.15 grams. The mean weight is 17.07 grams, while the median weight is 17.12 grams and two mode weights are 17.20 grams and 17.10 grams, with 8 specimens each having the latter two weights.

Laurion silver in ancient times had a reputation for its high quality. According to modern metallurgical testing, Owls in general have a very high silver content, lower in copper (as well as gold) compared with other ancient silver coins, which typically have higher levels of such impurities as a result of lower levels of silver in the ore used as well as coarse ancient smelting. According to Colin M. Kraay's 1962 *The Composition of Greek Coins: Analysis by Neutron Activation*, of the 40 fifth century Owls tested, all but seven had less than 0.25 percent copper or 0.04 percent gold or both. John H. Kroll and Hélène Nicolet-Pierre found a low copper content also in third century Owls, also minted with Laurion silver, according to a 1990 *American Journal of Numismatics* article. The nine Owls analyzed had a copper content of 0.01 to 0.06 percent, while the copper content of 18 other ancient Greek silver coins analyzed ranged from 0.89 to 2.77 percent.

The planchets of Classical Owls appear to have been produced by pouring molten silver into open molds designed to hold the correct amount of metal, which resulted in thick flans of irregular shape. The dies, likely made of bronze, were hand engraved using such tools as a burin, chisel, punch, and drill. As with most ancient coins,

the obverse die was placed in an anvil under the planchet, and the reverse die was held above the planchet and struck by hand with a heavy hammer, which caused reverse dies to wear out sooner than obverse dies.



Classical Owl Type B test-cut and countermarked tetradrachm (17.07g, 24mm), Athens, c. 431-393 BC, Sear 2526v., SNG München 52, Davis 143, Szego 14.

Like the previous four Owls on this page, this coin was test cut in ancient times and reveals no interior bronze. Like the Owl three pieces up, this specimen has a countermark, also called a banker's mark, on the reverse to the right of the owl, which is a mark typically used to certify that the coin is legal tender beyond its place of origin or has been re-tariffed at a different value. The upper mark appears to be a Semitic aleph (A), which would suggest that the countermark is of Middle Eastern origin. Owls are known to have been countermarked in ancient times as far away as [India](#).

The terms "countermark" and "banker's mark" are often used interchangeably for symbols, letters, or numbers that are stamped into the coin's surface after it has been minted for an official purpose. Countermarks are distinguished from graffiti, which are engraved or scratched markings created unofficially. The term "punchmark" is sometimes

used for a smaller official mark, as distinguished from a larger "countermark." Countermarks, large or small, are distinguished from "test cuts," which are crude slashes into the metal with a hammer and chisel to determine whether the coin was a silver- or gold-plated counterfeit. Sometimes these differences blur, when punchmarks appear to have been used also to reveal the metal in the coin's core. The term "countermark" or "counterstamp" is also used for the "COPY" or similar indication on modern replicas.

Most test-cut Owls were test cut on the reverse, with most of these in turn being cut through the owl's head. Interestingly, the test cut on this specimen follows the contours of the owl's body. It's likely that the owl's head was cut in half so often for one of two reasons. Perhaps coin testers in lands outside the Greek world were sending a message to Athens, a passive-aggressive protest against Athens' hegemony. Athens was one of the imperial powers of the day, controlling or exerting influence upon territories beyond its own and generating resentment in the process. The Egyptians and Judeans and Phoenicians and Syrians and Anatolians and Babylonians may have simply not liked the snooty Athenians, their pretty bullion, their god, and their god's little owl. Or perhaps, less interestingly, most test-cut Owls were cut at the owl's head because it was the high point of the reverse and cutting here thus caused fewer coins to be broken.

Similarly, the reverse rather than the obverse was typically test cut because it was concave, which also led to fewer coins being cracked during the procedure. If you test cut the convex obverse, there's a cavity under the reverse as the coin sits on its rim.

In his book *Archaic and Classical Greek Coins*, Kraay described test cuts as "savage incisions inflicted with a chisel with no regard for type or legend." He also wrote that hoard finds indicate that test cutting was normally applied outside the Greek world, where the type (design) on the coin didn't offer the same guarantee of authenticity and where these coins were treated as bullion. And he

wrote that some coins were test cut more than once by successive owners because old cuts when dirty or tarnished wouldn't reveal the color of the interior metal and because some forgers created pre-test cut plated fakes.

In their 1988 book *Coinage of the Greek World*, Ian Carradice and Martin Price wrote that test cutting of ancient coins in antiquity was a frequent occurrence both inside the Greek world (in Athens, for instance) and outside. They pointed to a papyrus reference indicating that in Egypt officials were employed to both collect debt and test cut coins. They also wrote that with some hoards of Greek coins unearthed in the Near East, particularly those from the archaic period, every single one had been test cut. This and other hoard evidence provides support for the view that test cutting was more common outside the Greek world, as Kraay wrote. Finally, Carradice and Price indicated that up to the fourth century BC, simple slashing was the most common method used to authenticate coins.

More intricate countermarks have been used on some coins since the beginning of coinage. On [Lydian Lions](#), which are the first or among the first of all coins, they appear to have been used as marks of ownership rather than marks of authenticity or legal tender. Pantikapaion heavily countermarked its bronze coinage during the third century BC to re-tariff it and earn profits in the process. In modern times banker's marks were used most notably in China from about 1750 to 1920 with large silver coins such as U.S. trade dollars and Spanish milled dollars. China didn't use silver for native coins, and the banker's marks, called "chop marks," indicated the coin was tested and determined to be of good silver.



Classical Owl Type B test-cut tetradrachm (16.99g, 26mm), Athens, c. 431-393 BC, Sear 2526v.

This specimen has been test cut an astonishing six times, the most test cuts I've ever seen on an Owl, once on the edge (visible on both obverse and reverse) and five times on the reverse. (An Owl illustrated in the section on test cuts in Haim Gitler and Oren Tal's 2006 book *The Coinage of Philistia of the Fifth and Fourth Centuries BC* also appears to have six test cuts, as is the case with one of the Owls illustrated in Peter van Alfen's article "The 'Owls' from the 1973 Iraq Hoard" in the 2000 *American Journal of Numismatics*.)

This many tests of authenticity on one coin speaks volumes about the high frequency of plated counterfeits that must have existed and about the paranoia that this likely engendered. The random pattern of test cuts visible on the reverse of the above piece imparts a jarring modernistic aesthetic that's also quite interesting. The protuberance near the base of Athena's skull looks like a casting sprue but is actually a flattening of the flan caused by one of the reverse test cuts.

Not all numismatists agree that test cutting was done to authenticate. Ute Wartenberg and Jonathan H. Kagan in their paper "Some Comments on a New Hoard from the

Balkan Area" in the 1999 book *Travaux de numismatique grecque offerts a Georges Le Rider*, Peter van Alfen in his article "The 'Owls' From the 1989 Syria Hoard, With a Review of Pre-Macedonian Coinage in Egypt" in the 2002 *American Journal of Numismatics*, and Richard Fernando Buxton in his paper "Chisel Cuts: Bureaucratic Control Marks on Fifth Century Owls in the Near East?" presented at the 2009 Archaeological Institute of America/American Philological Association annual meeting have proposed or commented on a theory that test cutting on Owls represented an elaborate system of bureaucratic control in the Middle East.

The logic of such severe gashes into the interior of the metal being used for this purpose, however, is strained. Deep test cuts had the potential of leading, and sometimes did lead, to a coin cracking into pieces, with the more cuts, the more the integrity of the coin's structure would have been compromised and the greater the chance of the coin breaking. What's more, the technology existed for imparting more information through the use of designed countermarks that were smaller, shallower, and safer. It's more likely that the multiple test cuts were just testimony to the abundance of silver-plated copper Owls that were circulating, both unofficial counterfeits and official emergency pieces. Some of the unofficial counterfeit Owls were even struck with test cuts that had been engraved into the die, as a further deception, trying to fool people that they had already been authenticated. It's likely that some percentage of traders and merchants would not have been satisfied with one cut. Each person test cutting any given piece would have wanted to verify for himself that the interior was good silver.

Not much contemporary documentary evidence exists about ancient coin authentication. An inscription found in 1970 referred to the Law of Nicophon passed in Athens in 375/74 BC, which governed the testing of money. The law required both official Athenian Owls and imitative Owls originating elsewhere to be tested by Dokimastes (testers). Any Owl found to be good had to be accepted in commerce. Counterfeit pieces, on the other hand, were to

be withdrawn from circulation.

The law, however, didn't indicate how the coins were to be tested or whether only the purity of the silver or both the purity and weight should be tested. In his 1998 book *The Power of Money: Coinage and Politics in the Athenian Empire*, Thomas stated his belief: "The purview of the Dokimastes does not seem to have extended to an examination of coins for their weight. Such calculations may have been left to negotiations between buyers and sellers."

In his 1996 book *Quality in Ancient Greece*, George Varoufakis stated his belief, on the other hand, that Athenian and other money testers tested both purity and weight. He suggested that the ancient testers could have used scales as well as looking, touching, and listening to the sound the coin made when dropped on a tabletop, a practice still employed by money testers today. Another piece of evidence, this one contemporary, is the c. 405 BC play *Frogs* by Aristophanes in which the playwright talked about how "coins alone are struck clearly and proven true by ringing."

My own belief is that official coin testers within Athens and other Greek cities tested their own city's coins by experienced, nondestructive looking, touching, listening, and weighing. But official testers of foreign coins as well as traders and merchants unofficially testing any coin wouldn't be concerned with defacing the coin's surface and would take a hammer and chisel to suspected currency to examine the inside.

Along with Classical and Intermediate Style Athenian Owls, other coins used heavily for intercity trade were also test cut frequently, including but not limited to Aegina Turtles, Philip II tetradrachms, Alexander the Great tetradrachms and drachms, Thasos tetradrachms, Sinope drachms, Cherronesos hemidrachms, and Mesembria diobols.

The above specimen was part of a hoard found in 2005 or

2006 and variously reported to consist of from 1,500 to 6,700 Owls, most of which were test cut in ancient times. The hoard was variously reported to have been found in Syria, Turkey, or Albania. Irrational laws in most source countries claim all things ancient found in their soil as part of their cultural heritage, which leads to secrecy and misinformation. Those closest to this hoard, as with many other ancient coin hoards, no doubt put out false information about where it originated to avoid tipping off authorities in the country. If these authorities had become aware of this hoard, they no doubt would have seized it.

The vast majority of new ancient coin finds go unreported, and untold knowledge of ancient coins in particular and ancient history in general has thus been lost, a situation that has existed for many decades. Laws in most countries in the Mediterranean, Balkans, and Middle East regions are overreactions to practices during past centuries when colonial powers moved significant quantities of artifacts from these countries into museums and private collections to the north. Such objects, however, are the heritage of everyone who shares a connection to ancient Greece or Rome or the regions they controlled. Further, many of the objects found in any given country were made and used by peoples totally different from those currently living in these countries. Finally, there's not enough museum display space for even a small fraction of the coins and artifacts found in any given year.

As typically happens with irrational laws, they're routinely broken. But because laws must be broken for ancient coins to reach the market, a black market exists. According to credible reports by those close to the situation, the operation of the ancient coin supply chain at the source in most source countries is controlled by mafia types who bribe government officials in order to smuggle coins out of the particular country. The coins are dispersed to coin wholesalers or coin dealers, typically in Germany or elsewhere in northern Europe, and they eventually make their way into collections.

Some archeologists are clamoring for the banning of

private collecting as the solution to this smuggling problem as well as the problem of the looting of archeological sites. But archeologists haven't shown themselves to be any better stewards of the past than source country governments or collectors. Many museum workers will tell you of the huge number of ancient artifacts stored in museum basements, not studied or displayed, and with many the information about their findspots and the context in which they were found has long been lost.

The solution as I see it is sharing. There's plenty of material for everyone. A rational, regulated, free market for newly unearthed antiquities and coins should be created. Rather than clamping down on collecting, we should encourage governments to free up the market, using the successful British model. With every newly uncovered hoard or find, museums in source countries and their governmental sponsors would choose what they wanted for their collections and to help preserve their cultural heritage, paying wholesale fair market prices for it. Governments would confiscate material shown to have been uncovered illegally at off-limits, bona fide archeological sites. The remainder of the material would enter the collector chain of supply, not through the black market as happens today with the majority of new finds, but openly so the material could be fully studied, so we could learn more about where we came from. To raise money, source country governments could tax openly exported items.



Classical Owl Type C repaired tetradrachm (17.34g,

23mm), Athens, c. 431-393 BC, Sear 2526.

The short neutral lips on this specimen characterize the last of the three main mouth styles of Athena on Mass Classical Owls. I'm calling this variety Type C and dating it c. 431 to 393 BC, same as Type B. Thus:

- Type A Mass Classical Owls, c. 454-431 BC, Athena with a smiling mouth
- Type B Mass Classical Owls, c. 431-393 BC, Athena with a frowning mouth
- Type C Mass Classical Owls, c. 431-393 BC, Athena with a neutral mouth

The most distinguishing aspect of the above specimen, however, is its having been repaired, with unmistakable evidence of an ancient test cut being filled in at some point fairly recently. In some fields such as painting, such repair or restoration work is considered acceptable and even beneficial. With coinage, however, it's considered trickery, turning a coin into something it's not and trying to hide its history, which is considered part of the coin.

The evidence of repair work, sometimes called tooling or doctoring, is the disturbance in the surface of the coin at Athena's cheek, where the test cut had been, and the coin being overweight. The surface here is smoother than the surrounding area, and there are clear and fairly straight borders separating the new surface from the original surrounding surface.

The work appears to have been done by adding molten silver to the test cut and flattening it out to blend it as much as possible with the surrounding surface. Because test cutting displaces metal rather than removing it, the added metal caused the coin to be heavier than the Classical Owl standard of 17.2 grams and heavier as well than the vast majority of Classical Owls encountered today. The chance of this happening in ancient times is virtually nonexistent, since test-cut Owls were valued the same as those not authenticated in this way and adding silver to the coin would have been counterproductive.

In comparison with other types of coin doctoring, filling in a test cut is far from the most egregious. The most deceptive doctoring, often considered a type of counterfeiting, is converting a coin from a common variety or type to a rare one by altering the legend or adding a mint mark. Also more deceptive, though less so, is reengraving the detail in the coin's devices and legends to make the coin appear to have experienced less wear than it did. Filling in an ancient hole is similar in its degree of deception to filling in an ancient test cut, though in this case the weight

wouldn't give it away since piercing a coin, unlike test cutting, removes metal. It only follows that in some cases, when heavy toning or patination is applied, coins that have had their holes or test cuts filled have gone undetected. Also considered to be coin doctoring, though the least deceptive, is smoothing out corrosion, the corrosion typically having occurred during the many centuries that the coin was buried underground. Though some collectors find it objectionable, manipulating an ancient coin's surface by adding artificial toning or patina is a routine part of the process of cleaning ancient coins and isn't considered deceptive by most.

Even though filling in a test cut isn't the height of numismatic iniquity, it's wrong headed, and it lowers a coin's market value. Interestingly, the seller of the above coin didn't have it labeled as repaired, but he did point this out after I had stared at Athena's cheek for some time. The coin is otherwise attractive, and all told it's a good example of the bad things that are sometimes done to coins.



Classical Owl Type C tetradrachm with crystallization defect (16.63g, 23mm), Athens, c. 431-393 BC, Sear 2526.

The most distinguishing characteristic of this coin is the large cavity in Athena's cheek. Upon closer inspection hatch patterns are also visible on the coin's surfaces, most prominently on the reverse. This indicates that the metal of the coin has become crystallized, or embrittled, which caused a piece of it to break off at some point fairly recently.

Also called intergranular corrosion, reticulate corrosion, or embrittlement, crystallization happens under certain conditions with silver coins that are naturally alloyed

with small amounts of copper or lead, as were most ancient Greek-era silver coins. Most Owls, however, very pure silver compared with other ancient coins, so relatively few Owls are seen crystallized.

Crystallization occurs because of the inherent instability of silver alloys at room temperature. The copper and lead separate from the silver over time, leaching out, causing voids between the silver grains, and lowering the coin's weight. This leaves the metal spongy and brittle while causing crisscrossing hatch marks and swirling, perpendicular grooves to form on the surfaces. Under magnification feather-like crystals can sometimes also be seen on the surfaces. Other times the crystallization is visually undetectable.

Though the term "crystallization" is commonly used in numismatics, "intergranular corrosion" is a somewhat better term because the metal isn't actually becoming crystallized. Instead, the crystalline structure of it is becoming more visible as a result of the internal corrosion.

I didn't buy the coin as an attractive example of ancient numismatic art but as a problem coin illustrating an interesting effect. On the other hand, the coin was sold by a large international auction house using a photograph that depicted the coin with what appeared to be attractive golden-brown toning, looking as if it had been sitting in a collection for many years. In hand, however, the coin is blast white, with absolutely no coloration, no doubt from very recently having been cleaned. As with other fields, sometimes digital photography is used deceptively, in this case to make a coin appear more attractive than it is.



Classical Owl Type C tetradrachm (17.12g, 23mm), Athens, c. 431-393 BC, Sear 2526, SNG Cop. 38, SNG Fitz. 3070, SNG Lewis 661, Dewing 1621, Kroll 8c, Szego 15.

This is another of my Type C Mass Classical Owls, and unlike many of the above coins, it's undamaged and absolutely beautiful. It appears to be a very late Mass Classical Owl, with Athena's asymmetrical eye beginning to open up at the inner corner and no parts of the incuse square visible on the reverse.

The noted numismatist T.V. Buttrey has disputed the Athenian origin of this and similarly styled Owls, giving them instead to Egypt. See Sear Greek 2526 for another similarly styled specimen. But thus far the evidence still argues in favor of Athens. There's no economic reason for Egypt to have minted Owls in great quantity. This and similar coins are of fine style, without any barbarized features, and the reverse inscription, AQE, remains the same as on official Athenian Owls, translating into "Of the Athenians." Here's further detail about the issue of [Athenian vs. Egyptian Owls](#).

The above specimen is beautifully centered and preserved, with attractive frosty surfaces. Here's what it looked like [before it was cleaned](#). Some numismatists and

collectors denigrate the aesthetics and commonness of Mass Classical Owls. But these coins have their considerable charm and appeal. The archaic style, marked by still formality and lack of perspective, reinforces the notion that these coins are products of antiquity. And these coins were monumentally influential.



Intermediate Style Owl tetradrachm (17.17g, 23mm), Athens, c. 393-300 BC, Sear 2537, SNG Cop. 63, SNG München 91, SNG Lockett 1873, SNG Delepierre 1469, Dewing 1635.

Intermediate Style Owls, also called Late Classical Owls, Hellenistic Owls, or (confusingly) Transitional Owls, retain the same basic Athena and owl iconography as the previous Classical Owls, though changes were made. The design is both more refined and coarse. In contrast to the almond-shaped frontal eye of Classical and Archaic Owls, the eye on Athena finally appears realistically in profile, triangular in shape, catching up aesthetically with other classical Greek coinage. But Athena's hair and, except with some of the earliest of these, the owl's feathers are rendered with less detail.

Many sources indicate that Intermediate Style Owls were minted from c. 393 to 200 BC, though it's likely

that their minting continued into the early second century BC. The 393 date corresponds to time when the Athenian general Konon returned to Athens with Persian money to rebuild, which reestablished Athens as a major power if no longer an empire. The Persian money became available after Sparta, previously a Persian ally against Athens, had a falling out with the mighty Persian Empire and began raiding Persian satrapies in Asia Minor.

The minting of Owls during this period was interrupted by the rise of Macedon, but there's no agreement for how long. Some sources indicate it was from c. 330 BC to 225 BC, others only from c. 263 to 229 BC. Macedon under Philip II and his son Alexander the Great defeated Athens at the Battle of Chaeronea c. 338 BC, though there's no evidence that after Alexander's ascension c. 336 BC he stopped the minting of Owls. Alexander permitted the minting of local coins throughout his empire, though no doubt the numbers of Owls minted dropped significantly, with Owls being replaced by Alexander's tetradrachms and staters as international trade coinage. Athens with the support of Egypt revolted against Macedonian rule and regained more of its independence c. 287 BC, but c. 263 BC Antigonous Gonatas stiffened Macedonian rule over Athens. When Demetrios, the Macedonian governor of Athens, died c. 229 BC, Athens revolted again, once again regaining more of its independence until the rise of Rome the next century.

Earlier fourth century BC Intermediate Style Owls such as the specimen illustrated above were issued during the century of Aristotle when Athens continued to flourish intellectually even though its military heyday was over. Athenian philosophy reached its zenith during the latter fourth century BC with the founding of schools by Diogenes (Cynics), Epicurus (Epicureans), and Zeno (Stoics).

The above thick-flanned coin is likely an earlier variety, though lacking the remnants of an incuse square or

more refined owl, it's likely not among the earliest. Later varieties depicted an owl with even coarser, more pronounced head and body feathers. This is a beautiful specimen, beautifully preserved and toned. The only real flaw is a reverse die break, sometimes called a die cud, around the owl's beak, causing metal to flood this spot when the coin was struck and detail to be lost.



Intermediate Style Owl off-center tetradrachm (16.64g, 22mm), Athens, c. 393-300 BC, Sear 2537.

This Intermediate Style Owl is distinguished by its having nearly the full crest of Athena's helmet on the flan. This is made possible, however, by the obverse being extremely off center, with most of Athena's face off the flan.

The lack of coordination between die size and flan size remained a problem and actually became even more severe with Intermediate Style Owls. As a whole they were minted on even tighter, thicker flans, with even fewer exhibiting all of the coin's design. Of the 336 Intermediate Style Owls with a fair chance of having been minted in Athens that are illustrated in Svoronos, on only one does Athena's helmet have a full crest and on only four does the helmet have fairly substantial partial crest. These thick coins aren't without their appeal. As with the previous archaically styled Classical Owls, they flaunt an ancient charm, though this charm

isn't in great evidence in the above piece.

Along with being off center, this coin is also well worn. It was graded by the seller, a large international auction firm specializing in ancient coins, as Very Fine, but much of the detail of the coin's surfaces has worn off. Despite the inherent subjectivity of grading, VF is clearly is a full grade overgraded, perhaps more if you grade the obverse (Very Good) and reverse (Fine) separately. The coin was also photographed somewhat deceptively, appearing to be toned and with relatively smooth surfaces, but in hand it's untoned and porous, having been harshly cleaned. Fortunately, it wasn't expensive. One reality of coin collecting as a hobby is that when not buying in person, sometimes you're pleasantly surprised -- usually, in my experience -- but sometimes not.



Intermediate Style Owl test-cut tetradrachm (16.83g, 22mm), c. 393-300 BC, Sear 2537.

This official Athenian coin was test cut twice in ancient times to authenticate it, once through the owl's head, once through Athena's head. It's the correct weight with no interior bronze exposed.

This is another ugly coin, with Athena's nose, half of

the owl's head, and half of the olive sprig off the flan. What's more, the force of the reverse test cut flattened the high points of the obverse -- the hair at Athena's temple and her cheek directly underneath. With this coin as well, there's also interest in the ugliness.



Intermediate Style Owl double-struck test-cut tetradrachm (16.98g, 22mm), c. 393-300 BC, Sear 2537.

This official Athenian coin is distinguished by three characteristics. It was test cut on the reverse in such a way that the owl appears decapitated. It was double-struck on the obverse. And it's corroded on both obverse and reverse.

What at first glance looks like a curved test cut on the obverse is actually the curvature of Athena's chin that has been widened by the double striking. If you look carefully, you can see two right eyes, two right nose nostrils, and two mouths. Despite the use of the term "double struck," what may have happened with this and similar coins is that the hammer or planchet slipped during the striking of the coin, causing the double or ghost image, meaning this didn't necessarily happen with two strikes of the hammer. What's more, many ancient coins are believed to have been struck with more than one hammer blow to bring up the details of their high-relief design. The term "die slippage" is therefore sometimes used instead of "double struck"

and is probably a better term overall.

The coin was sold as having "hoard patina." In this case, that's just a euphemism for "serious corrosion." The corrosion has eaten into the metal, and both in this photo and on the coin in hand the corrosion appears not to be elevated above the coin's surface but to be a part of it. Cleaning it would likely just result in the loss of detail and a pitted mess underneath. Thus whoever cleaned this coin stopped where he did. The corrosion, black, appears to be silver sulfide, the same corrosion product that produces beautiful multicolored toning on U.S. silver coins when it's thin. Over many centuries the sulfides in air, water, or soil in the right (or wrong) circumstances continue reacting with the coin's silver until the result is this, a nice example of the inexorable effects of time. Despite the corrosion and the reverse test cut, this fairly ugly coin is still full weight, at 16.98 grams.



Intermediate Style Owl repaired, overstruck tetradrachm (17.11g, 22mm), c. 393-300 BC, Sear 2537.

This is another ugly but interesting coin, for a number of different reasons.

It's repaired, with a filled-in test cut in the owl's head, which is visible through the vertical lines that define the boundaries of the original test cut and the discoloration.

This dealer who sold this coin initially put it up without mention of the repair work, but when informed took the auction down and sold it as a repaired coin.

Directly on the other side of the coin from the original test cut is damage to Athena's eye, nose, and chin that appears to have been caused by the force of the test cut. The coin must have been placed on a hard surface, without any soft material covering the surface to absorb the shock.

There's a flattening of the surfaces, but not directly on the opposite side of the test cut as happens with some coins. With this piece, there's flattening on both sides, on the reverse near the bottom of the owl's body and directly on the other side of the coin near Athena's ear. This suggests that a clamp or pliers may have been used to keep the coin place during the test cutting. Because a hammer and chisel were the most likely tools used for test cutting, two people must have done the work with this piece. But it's not good work, as evidenced by the damage, so those doing the test cutting appear to have been amateurs, merchants perhaps, not professional money changers.

The coin also appears to have been overstruck onto an existing coin, as evidenced by four deep edge cracks that appear only on the obverse, two unusual knobbed protrusions at the edge from metal being forced there during the strike, and edge layering. There's no indication, though, of what the undertype was.



Intermediate Style Owl crystallized, test-cut tetradrachm (15.87g, 24x21mm), c. 393-300 BC, Sear 2537.

Here's yet another ugly but interesting Intermediate Style Owl. It's both test cut and crystallized, with the swirling patterns in the coin's surface very noticeable. Unlike with the crystallized Classical Owl pictured above, however, no part of the surface of this coin has broken off.

Visibly crystallized coins typically have a lower market value than those without such signs, but crystallization is also a visually interesting example of how numismatic metal can change over the millennia.



Intermediate Style Owl cut tetradrachm (7.16g, 25mm), c. 393-300 BC, Sear 2537.

This official Athenian coin was cut in half in ancient times, no doubt to make change. Owls were frequently treated as bullion in the foreign lands where they traded, and one way to make change was to cut one in half. This piece was said to have been found in the Middle East, where many Owls circulated and where it would have been halved more than two millennia ago. It's not cut exactly in half, with this piece being the slightly lighter one (the other piece wasn't found with this one). It has the look and feel of solid silver, with the interior exposed at the cut being no different from the surfaces.



Intermediate Style oblong Owl tetradrachm (17.16g, 26x18mm), Athens, c. 287-263 BC, Sear 2547, SNG Cop. 65, SNG Delepierre 1482, Svoronos Pl. 31 No. 11.

This is a later Intermediate Style Owl, issued during the third century BC when Athens was in a period of decline, with the intellectual capital of the world

shifting to Alexandria, Egypt. Athens was precariously independent during this time. Soon Athens would be under the hegemony again of Macedon, then later of Rome. Despite its relative independence, which allowed for the issuing of its own coinage, Athens no doubt experienced little of the civic pride that characterized its past, with little attention given to the aesthetics of its coins and leading to the sloppy preparation of their flans, as evident on this and similar pieces. The above piece is wildly oblong, nearly a third longer than it is wide.

The above specimen also has a test cut on the reverse, rendered inconspicuous by the toning, between the owl and the inscription. The dark, almost black toning appears to be original hoard patina, the surfaces of the coin as found. Most ancient silver coins are more heavily cleaned, sometimes stripped completely and then retoned to affect a more attractive ancient appearance.

The last of the Intermediate Style Owls, dated after the above variety, were the rare "heterogeneous" issues of the late third century and early second century BC when Athens again had a measure of independence if not stability and prosperity. They include small subsidiary symbols on the reverse in anticipation of the widespread practice of doing so with New Style Owls that began during Roman times. The symbols used on these heterogeneous issues, according to Barclay Head in his 1911 book *Historia Numorum*, include a gorgoneion, bucranium, prow, trophy, rudder, cornucopia, wreath, Corinthian helmet, trident, and stern of galley. Sear catalogs two, Sear Greek 2548 and 2551A, depicting a bull's head and winged thunderbolt respectively.

These heterogeneous Intermediate Style Owls are true "transitional" Owls in that they combine design elements from different periods. Other examples of transitional Owls include early Intermediate Style Owls that retain the more detailed owl or remnants of an

incuse square of earlier Classical Owls and early New Style Owls with relatively simple reverses.

Much of this is semantics, but how we name things reflects how we think about them, and how we think about them is a reaction to their reality. Some people confer the term "Hellenistic" to Intermediate Style Owls or even New Style Owls, but Owls don't align well with Hellenistic boundaries because of Athens' unique history. A large percentage of Intermediate Style Owls were minted during Hellenistic times, but they were initiated before the reign of Alexander the Great and thus preceded the Hellenistic Age. New Style Owls were minted after Athens was under the hegemony of Rome, so at least for Athens, if not yet for Egypt, Hellenistic times were over.



New Style Owl tetradrachm (16.64g, 29mm), Athens, c. 141-140 BC, Sear 2555v., Thompson 729d.

New Style Owls retain the Athena and owl iconography of earlier Owls but change in styling dramatically, becoming considerably more elaborate. Athena now wears a triple-crested helmet, with the helmet crest typically appearing in full on the flan, which is larger

and wider than with earlier Owls in conformity with other coins of this period. The owl also now sits on an amphora (jug), which refers to Athens' international olive oil trade, and is surrounded by an olive wreath.

On most New Style Owls lettering and symbols mark the date and month of issue and the magistrate responsible for the minting, though the early varieties were more simply designed. On the above specimen, a quiver (arrow case) and bow appear in the reverse right field. The reverse of the above specimen also shows evidence of slight die slippage.

The minting of New Style Owls began c. 164 BC and ended c. 42 BC when Rome stopped the minting of Athens' silver coinage and replaced it with its own denarii, perhaps with the arrival of Mark Antony in Athens. The well-regarded numismatist Margaret Thompson established a dating system for Athenian New Style Owls in her 1961 book *The New Style Coinage of Athens*. But her conclusions were widely criticized as being too early based on the hoard evidence and the historical markers. As testimony to her scholarship, Thompson eventually accepted the corrections.

New Style Owls were minted under increasing Roman domination of Greece, which began with the Battle of Pydna c. 168 BC in which Rome subjugated Macedon and continued through the Roman subjugation of most of the rest of Greece with the Battle of Corinth c. 146 BC and the unsuccessful revolt against Roman rule by Athens and other Greek cities led by Mithradates the Great of Pontus in the three Mithradic Wars beginning c. 88 BC and ending c. 63 BC. Many New Style Owls were no doubt struck to pay mercenaries in this warfare.

Unlike with earlier Owls, fourrees of New Style Owls are rarely seen, and no doubt as a result, authentic specimens are rarely seen test cut or countermarked. New Style Owls weren't the hugely popular international trade currency of previous Owls, though

as with previous Owls they did influence coinage in geographically disperse regions, including northern Asia Minor and southern Arabia.

During the time these coins were minted as well as afterward, Athens was a semi-autonomous city seen by the Romans as an academic and cultural capital, though Greece as a whole became increasingly emaciated militarily, economically, culturally, and intellectually. The quality of life in Greece improved after the ascension of Augustus, the first Roman emperor, c. 31 BC and stayed that way during the first two centuries AD. During the third century AD, disorder within the Roman Empire and barbarian incursions from without led to heavy taxation, instability, and economic decline within Greece.

As with few other cities and regions, Rome permitted Athens to mint bronze coins during imperial times with Athens' own types, including Athena and her owl, rather than forcing the use of a portrait of a Roman emperor or other family member. Ancient Athens struck her last coins c. 267 AD.

Athens would be under the Romans until c. 330 AD, the Byzantines from 330 to 1204, the Western Crusaders from 1204 to 1453, and the Ottoman Turks from 1453 to 1827. Greece declared independence in 1821 and ratified a constitution in 1827, but it wasn't until after the Greek War of Independence from 1821 to 1829 that Greece was recognized as an independent country in 1832 by the great powers of the time, the United Kingdom, France, and Russia.