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The Double Apollos of Istrus

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Abstract. Istrus, a Greek colony of Miletos, on the western shore of the Black Sea, minted coins having an unidentified, unique image of two identical young male heads, one inverted with respect to the other. Earlier numismatists had several rather implausible interpretations for the symbol, but we suggest it may represent a total solar eclipse. There were three plausible eclipses visible just from Istrus and nearby regions in the classical world between about 450 and 400 BCE, when the coins are dated by numismatic criteria, of which the annular eclipse of 434 BCE was the most dramatic. The heads are, we believe, representations of the sun god Apollo. The inversion symbolizes the positions of the solar disk during the entering and exiting parts of the eclipse.

The city of Istrus (ΙΣΤΡΟΣ, Istros, Histria) lay on the west shore of the Black Sea, in what is now Romania and was Thrace, at the mouth of the River Danube. Istrus thrived from about 800 BCE to about 400 CE. It was a colony of Miletos, and then of Rome, and declined when the mouth of the Danube silted up and shifted. It became landlocked in the sixth century and was abandoned. Istrus was the Greek name for the Danube (Aristotle, *Meteorologia*).

During the Hellenic period, Istrus was an important trading colony with the Black Sea coastal cities and between the northern regions and Miletus and Athens to the south. During the same period, for centuries, the city minted coins of various denominations that have a remarkable image of two heads. The coins are catalogued by Sear as #1669 etc.¹ The symbol is unique in the entire history of numismatics and, indeed, of

¹ D. R. Sear, *Greek Coins and their Values*, Vols 1 and 2 (London: Seaby, 1997).

symbols. There are, for example, no other examples found in the Warburg collection of iconography at University College, London.

The symbol depicts two identical heads, one of which is upside down. On no examples of coins in the Fitzwilliam Museum in Cambridge, nor in a number of catalogues that we have inspected, is the symbol associated with any markings other than the heads, i.e., no material that might aid their identification. Here we suggest that a solar eclipse inspired the symbol.

The coins

The heads on the Istrus coins are off full face – almost three-quarters profile. Most of the depictions of heads on Greek coins are profiles, and some are full face. Few are three quarter profiles. The heads have long, wavy, neck-length hair, sometimes centre-parted. The faces are young, round and chubby, with full lips, wide-open eyes, melting features and no beard. The heads are those of a beautiful youth.

The two heads are identical and side by side. But one is upside down relative to the other. This configuration contrasts with depictions of Janus. In the Janus image, the faces are reflected, looking to left and to right. In the Istrus heads, both faces look forward but one is upside down. The two faces of Janus are often identical but also, sometimes, different in age or sex. Janus may represent the past and future, or the inside and outside of a doorway. Figuratively, Janus represents two-faced hypocrisy.

The reverse of the Istrus coins shows an eagle holding, and in some examples apparently pecking, a dolphin. In some examples of the coins, the reverse is labelled with the city name, ΙΣΤΡΙΑ. Many show a single Greek letter, thought to identify the series of the coin issue, or to be a validation mark, such as the initial of the magistrate under whose authority they were issued. Coins of Sinope (an earlier colony of Miletos on the southern shores of the Black Sea) and of Olbia to the north also portray an eagle standing on, and sometimes flying over or carrying a dolphin. The eagle and the dolphin (which, curiously, in the constellations lie next to each other, as Aquila and Delphinus) have symbolic and historical associations. Often the eagle represented Zeus, and its ability to carry a large and heavy dolphin in its talons may indicate the power of Zeus. The dolphin has long been a symbol of cities on the Black Sea. It seems natural that the cities of the Black Sea community should have a commonality of symbols and that these should arise from the area's natural history. The dolphin and the eagle can readily be

understood. The heads however cannot. How can we approach the identification?

The coins of classical Greece show a remarkable variety of designs. Within conventional limits of size, material and weight (the 'metric'), which denominated a coin's value, the coin's markings show any of a number of designs, consisting variously of lettering, icons and pictorial elements – animals, birds, fish, insects, *etcetera*. According to the *Encyclopedia Britannica* 2001:

Greek coin types, early and even later, were simple in conception and often taken from the animal world. They include many kinds of animals (with the bull, symbol of a river, very common); birds (such as the owl of Athens, the eagle of Zeus at Olympia, the dove at Sicyon); insects (like the bee of Ephesus); fabulous creatures (like the griffin at Abdera); and vegetable objects. Not uncommonly such types were chosen as punning allusions to a city's name--the lion at Leontini; the goat at Aegae; the quince at Melos; the sickle-shaped harbour at Zancle; the selinon leaf at Selinus; the cock, harbinger of hemera, the day, at Himera. In others a city's staple product was proclaimed, like silphium at Cyrene, a silver-miner's pick at Damastium, a bunch of grapes at Naxos, a wine jar at Chios. Cult associations frequently dictated the choice of type. Tarentum showed its mythical founder, the dolphin-rider Taras; Knossos, the Minotaur (half man, half bull) or Labyrinth; Croton, the tripod of Apollo; Poseidonia, a statue of Poseidon, god of the sea. Human or anthropomorphic figures, however, were comparatively rare on early Greek coins, though the famous gold darics, a name derived from Darius I, and silver shekels of Persia showed the great king in an attitude of attack. Much more popular was the representation of idealized heads of deities, which, once established for the two Athenas, Parthenos and Chalinitis, at Athens and Corinth, quickly became the vogue elsewhere, encouraged by the development of double-relief coinage (i.e., coinage with obverse and reverse in relief), which allowed the head of a civic deity to be paired on the other side by the city's symbol.

The great variety of designs arises from the administrative structure of classical Greece, of small, locally-based units, in particular the city states.

Using inscriptions and the archaeological evidence, it is often possible to identify coins of a given iconography with individual cities. Given that the particular form of iconography on the coins of a given city often depicts people, objects, mythological beings or gods associated with the city, we need to look for an identification for the antiparallel heads that in some way relates to the city of Istrus.

Chronology

If we are to make a connection between the symbol and an eclipse, chronology is an obvious consideration. The various issues of the coins are dated in the following ways.

By coin making technology (the 'fabric'). The earliest coins showing the symbol were struck by a method (with a narrow reverse die) introduced about 500 BCE and superseded by a method (with wide reverse die) about 400 BCE. The symbol must therefore date before the introduction of the new technology. The dates are conventional, and, since Istrus was at the north-east extremities of the Hellenic region, the diffusion time of the new method to Istrus could have been decades. We could say that the symbol dates prior to, say 350 BCE.

Stylistically. The execution of the symbols on the coins becomes progressively more sophisticated with time. Some of the later coins are stylistically related to coins from other cities that show Phillip of Macedonia (about 320–350 BCE). The earliest coins and therefore the symbol predate this period.

The 'metric' of the coins, i.e., their alloy and weight compared to other, better dated, coins. This puts the start of the earliest series after 480–430 BC. However, other Istrus standards do not relate to wider Hellenic standards and this date must be used with caution.

By archaeological association. A hoard of coins of an early series was found in the necropolis of Orgamé-Argamum in a pot of the type known as an *askos*. The painted figures on the pot are dated stylistically to the first part of the fourth century BCE, circa 380–360 BCE.² On the

² Vasilica Lungu and Gh. Poenaru Bordea, 'Un trésor de monnaies d'Istros à Orgamé', in *Civilisation grecque et culture antiques périphériques*, eds Alexandru Avram and Mircea Babes (Bucharest: Editura Enciclopedica, 2000).

assumptions that the coins predate the pot, and the symbol predates the coins, the symbol predates 380–360 BCE.

By numismatic association. As mentioned above, the reverse image of an eagle and a dolphin appears on coins of Sinope issued about 41–365 BCE. The symbol predates this.

These dating criteria for the coins are summarised in Table 1. It would be consistent if the symbol originated between about 450 and 400 BCE. But it might have originated a lot earlier. It could possibly have originated a little later, depending on the reliability of the dating methods.

	500		450		400		350		300	BC
Striking method	N			<	W	*	*	*	*	*
Style						<	*	*	>	
Metric standard		>								
Hoard						<				
Reverse symbol				<	*	*	>			
Eclipses A=annular T=total				AA 431 434				T 337		

N: Introduction of narrow die. W: Introduction of wide die.

*: Coins exist at this date. >: Coins would exist after this date. <: Coins would exist afterwards.

Table 1. Dates of the two-headed coins.

Interpretation of the heads

What does the two-headed icon represent? There have been the following suggestions (Head).³

³ Sear, *Greek Coins and their Values*; Longrigg, in F. K. Ginzel, *Spezielle Kanon der Sonnen- und Mondfinsternisse für das Ländergebiet der klassischen Altertumwissenschaften un den Zeitraum von 900 vor Chr. bis 600 nach Chr.* (Berlin: Mayer & Müller, 1899); B. Pick, *Die Antiken Münzen Nord-Griechenlands*, Band I. *Dacien und Moesien* (Berlin: Reiner, 1898); B. V. Head, *Historia Numorum: A Manual of Greek Numismatics* (Oxford: Clarendon Press, 1911).

The Dioskouri. The Dioskouri were the brothers Kastor and Polydeukes. They later became the twins Castor and Pollux. The Dioskouri are usually shown as brothers rather than twins. They are usually shown at full length on or near horses, often wearing egg-like hats or helmets, and sometimes with stars. None of these features show in the Istrus heads and there is no explanation of the geometry of the image. The only feature of this explanation of the symbol that works is that there are two people in it.

The Danube. The river was believed to have two outlets, into the Adriatic and the Black Sea. However, river-gods are bearded, with long hair flowing like the currents of waters. The geometry and the special position of Istrus support this explanation, but not the iconography.

The two directions of commerce between the east and the west, mediated by Istrus. This explanation seems forced.

Winds blowing in opposite directions. The cheeks of the heads are not puffy and mouths are closed. This explanation is weak.

Apollo. On some other Greek coins, e.g., from Rhodes and Miletos (# 4313, 4504, 5037-5054 in Sear),⁴ there are similar single heads that can be identified from the head's radiant markings, or from conventional attributes with the sun god, Apollo or Helios. The Istrus heads look like them. They also look like other representations of the sun god, e.g., the Belvedere Apollo. The Istrus heads are posed in three quarter profile, which is often the case in relief representations of Apollo and Helios. On the basis that what looks like a duck might be a duck, this explanation of the symbol deserves further investigation.

Is there any evidence that the sun god was of particular significance? No Temple of Apollo is known at Istrus and no special significance is known to have been paid there to the sun god, although earlier in the region the Thraco-Getae (2200–800 BCE) developed a sun-cult and decorated their artwork with sun symbols. In no well identified representation of Apollo does his head appear twice. If the heads are those of Apollo, why are there two and why is one upside down? One suggestion is that the Sun's rising and setting gives the geometry. Certainly the Sun 'turns upside down' between rising and setting. But the sun has no 'top and bottom' markers and nothing obvious shows that it

⁴ Sear, *Greek Coins and their Values*.

has been reversed. And why does this concept of sunrise and sunset result in a double head in Istrus but nowhere else in Greece?

An alternative explanation of the geometry is that the symbol represents a solar eclipse. Solar eclipses can be seen from a limited area and it is plausible that a particular eclipse could catch the imagination of a particular city. Moreover, the motion of the Moon entering and leaving the Sun's disc makes a geometric reversal of the crescent of the partial phases preceding and following the maximum eclipse.

We therefore initiated a search for solar eclipses seen in Istrus from 450–300 BCE. We are grateful to Dr Andrew Sinclair for carrying out the calculations. We note that the accuracy of the calculations in respect of the variable rotation of the Earth is calibrated by historically recorded eclipses that span the period in question.⁵

There were two annular solar eclipses visible from Istrus in this period, and one total solar eclipse. The annular eclipses were on 4 October 434 BCE low in the dawn sky at about 06:30 local time and on 3 August 431 BCE at 17:39. The latter eclipse was recorded by Thucydides as occurring during the Peloponnesian War.

The total eclipse occurred on 14 July 337 BCE, when the Sun set just 3 minutes after totality ended. This eclipse would have been dramatic, the Sun setting as a thin crescent, provoking questions as to whether it would rise again the following morning. The total eclipse had the more limited visibility of the three and would readily explain why the symbol became associated with only the one city. Unfortunately, the total eclipse is 50 years late for the numismatic chronology.

Of the two annular eclipses, we favour the first as the one that provoked the Apollo symbol, because it occurred with the sun low, rising over the sea, and is the more striking. The Sun rose as a crescent with horns sticking upwards. Twenty minutes later the crescent had reversed. The annularity of the eclipses was limited in geographical distribution, but partial eclipses would have been more widely visible. This would not be the only solar eclipse on Greek coins. A rimmed disk on gold coins of Hicetas of Syracuse (c. 289/8-279/8 BCE) appears to be a total solar eclipse seen from Sicily during a Carthaginian war.⁶

⁵ R. R. Newton, *Ancient astronomical observations and the acceleration of the earth and moon* (Baltimore MD: The Johns Hopkins University Press, 1970); F. R. Stephenson, *Historical Eclipses and Earth's Rotation* (Cambridge: Cambridge University Press, 1997).

⁶ T. V. Buttrey, *Zeitschrift für Papyrologie und Epigraphik* 22 (1976): p. 248.

The proposed explanations of the double heads are summarised in Table 2.

	Two	Young	Men	Identical	Appearance	Antiparallel	special to Istrus
Dioskouri	√	√	√	Later	Not really	×	×
Danube – river gods	√	×	√	?	×	√	√
Commerce	√?	?	?	?	?	√	?
Winds	√	√	?	√	×	√	×
Apollo	×	√	√	×	√√	×	×
Apollo – sunrise/set	√	√	√	√	√√	Not really	×
Apollo – annular eclipse	√	√	√	√	√√	√	Not really
Apollo – Total eclipse	√	√	√	√	√√	√	√

Table 2: Iconography

The more ticks and the less crosses the better the fit of the hypothesis to the symbol of the two heads.

Conclusion

We have proposed an interpretation of the double headed Apollo symbol of the coins of Istrus as a solar eclipse, which is a good fit to the iconography. If the coins are as conventionally dated, then the annular eclipse of 434 BCE is a good candidate for the eclipse that inspired the symbol. The total eclipse of 337 BCE would be an even better fit as far as the iconography is concerned, and was more awe-inspiring. But this explanation would require the start of the series of coins to be re-dated later by about 50 years. The following investigations are suggested by this proposed association:

- To re-examine the dates of the coins.
- To search whether there are examples of the symbol in neighbouring cities along the coast of Thrace, i.e. where the eclipses were also visible in similar circumstances.

- To correlate further the dates and proposed explanation with archaeological and other evidence, e.g., establish if there was a temple dedicated to Apollo at Istrus.

Acknowledgements

Numismatic information about the coins was communicated to us by Prof. E. Buttrey and Dr Adrian Papescu, Fitzwilliam Museum, Cambridge.



Figure 1. The Istrus coin. The obverse shows two heads and the reverse, lettered with the name of Istrus in the Ionic dialect, a dolphin and eagle, symbols found together on coins from cities around the Black Sea.

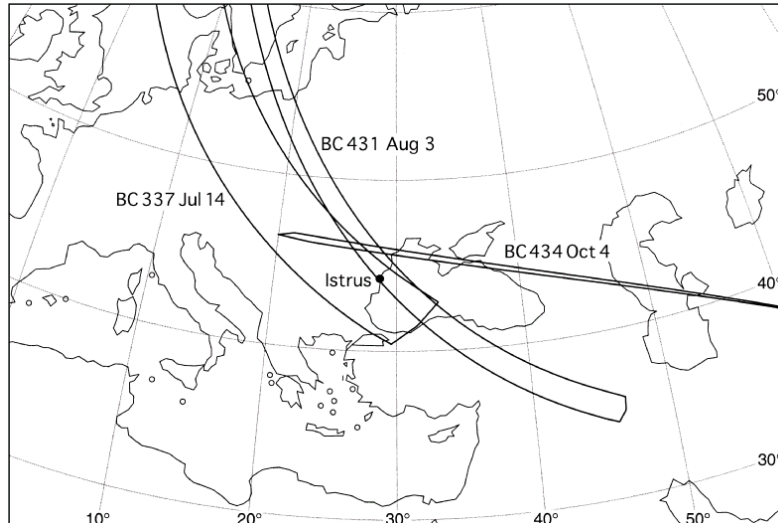


Figure 2. The three total or annular solar eclipses that tracked over or near Istrus between 450 and 300 BC.

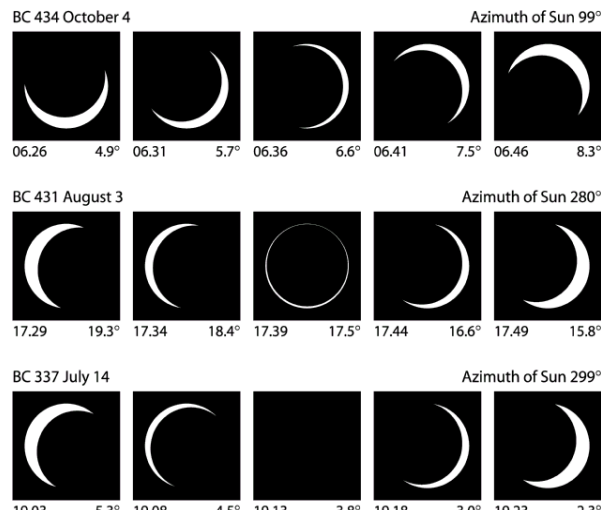


Figure 3. The appearance of the three solar eclipses visible between 450 and 300 BC. The eclipses of 434 BCE shows an upside-down reversal of the horned partially-eclipsed Sun, which we suggest is the origin of the anti-parallel duplicate heads of Apollo on the Istrus coins.