

PHOENICIAN COINS AND PHOENICIAN EXPLORATION

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Summary

Numismatic evidence favoring the hypothesis of a Carthaginian presence in North America has recently come to light. The evidence is twofold. The first piece of evidence consists of a particular group of early Carthaginian gold coins (called staters) that bear a map (derived from modified Punic letters) showing both the Old World and the New World. Going from east to west, the maps show India, the south coast of Europe above Sardinia and Sicily, and America.

The second piece of evidence consists of a series of seven or eight copper coins found scattered across North America from Nebraska to Georgia to Connecticut. The coins have an image of the Punic horse, the Phoenician palm tree (uprooted as if to be transplanted) and an enigmatic inscription in the Punic language. It seems unlikely that these coins were brought across the Atlantic in modern times, and if authentic they suggest a Carthaginian presence in ancient America.

Taken separately, these pieces of evidence could be dismissed as some type of fluke or hoax, respectively. But taken together, along with the fact that Carthaginian gold and base metal coins were reported from the Azores in 1778(1), the available evidence suggests that the Carthaginians had the ability to cross the Atlantic at will.

The Carthaginians were the western tribe of the Tyrian Phoenicians. The awesome abilities of both Tyrians and Carthaginians as seafarers left such an impression on the ancient mind that rumors have circulated ever since on the subject of exactly how far the Carthaginians reached with their ships. Peter Whitfield, although he accepts Herodotus' account of the Phoenician circumnavigation of Africa in 600 BC, says of the Phoenicians that "of their science, geography and chartmaking, if

any, we know nothing . . . and as far as we can tell formal cartography played no part in their maritime achievement(2)."

The recent discovery of Tyrian deep water shipwrecks dated to 750 BC, complete with intact ceramic jugs and amphorae, promises to provide us with more information about Phoenician trade and exploration(3). This is a fortunate development, because, apart from Phoenician coinage(4), there are indeed comparatively few well preserved relics

of Phoenician civilization. When Carthage was defeated in 146 BC, most of Phoenician literature, architecture, geographic knowledge (which Phoenicians were secretive about to begin with), and that hard-to-define-something we call 'style' was lost forever.

Or was it? In 1996 I argued that Carthaginian gold staters minted in 350 BC contained tiny maps of the Mediterranean world(5). I further claimed that these small maps ("worldcards") included cartographic representations of India and the Americas(6). These claims led to a heated controversy, culminating in the publication of an image of one of the coins with the pattern of interest on the cover of the magazine *Mercator's World*(7).

I was first drawn to this problem by curious markings in the reverse exergue, underneath an image of the Carthaginian horse, on gold staters of Group IIIa of Jenkins and Lewis(8). The hitherto problematic markings in the exergue field of these coins are discussed by Müller(9) and Jenkins and Lewis. Müller claimed to be able to read the inscription as:

ha.lh

Müller (p. 126) explained the letters as two abbreviated personal names, which he interpreted as the initials of Carthaginian moneyers(10):

... two groups of letters, separated by a point, are set off in the exergue. So far as it is possible to discern them, the characters, which are very obscure, read: ha.lh; the two letters in the middle are tilted toward one another, a result of

being squeezed into the tight space of the exergue. This legend, similar to analogous legends of the coins of Sabrata (see p. 27-28 and 33), undoubtedly represents two abbreviated personal names, such as the names of two suffetes (Carthaginian senators) or the names of two magistrates/moneyers; the latter would appear to be the most probable on account of the small size of the letters. [my translation from the French]

Jenkins and Lewis were able to rule out Müller's 1860 hypothesis on the grounds that the Punic letter h in this form (i.e., shaped like a Russian "ya") is found only in Neo-Punic and does not appear in inscriptions until the first century BC. Jenkins and Lewis(11) were nevertheless frankly puzzled by the inscription-like patterns:

... not the least baffling aspect of it is that the letters, if treated as such, are so extremely hard to interpret: the whole thing seems quite unnecessarily obscure by comparison with the inscriptions on other Punic coins of the same date .

...

Alexander MacGregor, Jr. of the Department of Classics, University of Chicago reinterpreted the exergue pattern as the Phoenician letters aleph-reshadhe ("aratz"), which means "homeland" in Phoenician(12). Unfortunately, this explanation does not apply to known specimens because more than three letters are visible in their exergue patterns.

The exergue pattern varies widely, but there are elements in common from coin to coin, such as the centrally located dot in the middle of the pattern. In an attempt to test the map hypothesis against the inscription hypothesis for these coins, in April 1999 I visited the student room of the British Museum Department of Coins and Medals (the repository of most coins of this type). Examination of the Carthaginian gold and silver coins in the British Museum collection provided a good deal of new information, but I still had no definitive answers. Later, however, it became clear that the exergue pattern I was examining on the gold stater was indeed an inscription in the Punic language, although one that had not been correctly interpreted for some 2,000 years. A close look at stater Jenkins-Lewis 6 (J-L 6) had revealed the Punic word *qrthdsht*, meaning "New City" or "Carthage(13)."

The Punic letters in most of the gold staters have been contorted almost beyond recognition, but by comparison with some of the early Carthaginian silver tetradrachms (British Museum Carthage PCG III C. 40 AR, R4835/32, PS 061565 and British Museum Carthage PCG III C. 40, PS 197869; both SG(14) 6427), the exergue pattern in J-L 6 can be read as *qrthdsht*, or "Carthage" (Figure 1; note that Punic is read from right to left and lacks vowels). The text element that proved to be key in this case consisted of the two short vertical strokes tilted to the left and positioned to the left of the central dot in the exergue pattern of J-L 6, a gold stater Group IIIa of Jenkins and Lewis. The two vertical strokes on the gold coin correlate well with the (more centrally located) vertical strokes on the silver coin inscriptions. The vertical

strokes in both the gold and silver coins represent the Punic letter *h*. The central dot in the gold stater exergue pattern thus appears to be a modified right cross-bar in the Punic letter *t*.

The inclined strokes forming a Punic *h* are also seen in gold stater J-L 8-3, but they are smaller and the overall exergue pattern in this coin is more stylized. The Punic *t* at the end (left side) of this inscription has been modified into the shape of an eye. This *t* also has a central dot, which seems to serve as the pupil of the eye. Very interestingly, a later coin in the gold stater series (J-L 22) lacks an inscription but has the eye(15) (this time lacking a pupil) in the same position as the eye/letter in coin J-L 8-3.

Note that all of the coin inscriptions or patterns shown in Figure 1 are (with one exception) placed in their proper age sequence from 410 BC to circa 350 BC. The beginning of this date series is extremely well established due to the efforts of numismatist G. K. Jenkins.

While viewing coins in an auction catalog in the 1970's (Bank Leu Auction 2 of 1972, lot 2.69), Jenkins(16) noticed a Greek (Akragas) tetradrachm struck over another coin. Jenkins realized that the undertype was an early Carthaginian silver coin, a beautiful type (SG 6426) with, on the obverse, the forepart of a prancing horse being crowned by Nike, both to the right, a single barleycorn in the field to the right, and the Punic inscription *qrthdsht* ("New City" or "Carthage") below. The reverse has a symmetrical date palm with two date clusters, flanked by the inscription *mhnt* ("The Camp"). Jenkins was able to

Table 1			
No. Pellets	J-L/TCWH I Numbers	EXERGUE PATTERN	EXERGUE LINE
1	5/2	unclear	single
2	6/3	qrthdsht	double
	11/12	map; sh may be visible to left of central dot	single
	12/13	unclear	single
3	7/4	unclear	single
	13/14	map	single
4	8-2/6	map	single
	8-1, 8-3, 8-4/5, 7, 8	qrthdsht for 8-3/7; others unclear	single
	10/11	map	single
5	4/1; "soft serve ice cream" forelock curl	map; sh may be visible to left of central dot	double

detect this coin as the undertype because he noticed that a date bunch was visible on the front overtype horse's flank and parts of its main, and that the bridle and topknot from the Carthaginian horse and Nike's belt appear on the front eagle of the Greek coin. Jenkins was able to use this juxtaposition of types to date the Carthaginian coin to approximately 410 BC. Jenkins received compliments from his fellow numismatists(17) for his sharp eyes. To provide a relative dating method for the gold coins, I assume that coins of Group IIIa with fewer dots or pellets on the reverse were struck earlier, and that those with greater number of dots on the reverse (as many as five dots are known) were struck later in the Group IIIa series. This seems a reasonable method(18), for the count of reverse dots has proved a

reliable dating method for coins minted later in the Carthaginian gold and electrum stater series(19) (Groups VI and Xa), and also works for some Carthaginian bronzes.

Jenkins and Lewis were able to organize the electrum staters of Carthage of Groups VI and Xa into relative chronological sequences within each group based on the number of pellets (deployed above the exergual line around or sometimes on the body of the horse) occurring on the reverse of the coins. Using a similar approach, I propose here (20) a relative chronology for the map coins. In general, the more pellets on the back of one of the gold staters, the further along in the sequence the coin is. The table organizes these coins by numbers of pellets.

In general, the exergue patterns with a more map-like aspect are associated with more pellets on the reverse of the coin. Note that even in most of the unclear patterns, a central dot I interpret as Sardinia is still present.

Coin J-L 4/TCWH I 1 has a double exergue line and a "soft serve ice cream" curl at the top of Tanit's forehead that seems to link this coin stylistically to the gold staters of Group IIIb (coins J-L 14-17), coins which have both a double exergue line and (in specimens J-L 15-17) the distinctive forelock curl. Coin J-L 4/TCWH I 1 also has five pellets on the reverse (the most of any coin of J-L Group IIIa), and thus might well be expected to have the most stylistic similarities to the next group, Group IIIb. Note, however, that coin J-L 6/TCWH I 3 also has a double exergue line but has only two reverse pellets, and would thus seem to be out of sequence. Jenkins and Lewis (p. 77) did not note in their dot placement diagram for this coin that the exergual line is double.

A further piece of evidence supporting this relative chronology is provided by the two pellet coin J-L 11/TCWH 12 and the three pellet coin J-L 13/TCWH 14. Both coins share the same obverse die, but the obverse design of coin J-L 13/TCWH 14 was struck from very worn dies. Here, then, there is clear evidence that a two pellet coin preceded a three pellet coin, in accordance with the scheme proposed above.

As noted earlier, the only coin that seems to be out of sequence is J-L 6/TCWH I 3 on account of its double exergual line, which might lead one to suggest that it should be placed, as is coin J-L 4/TCWH

I 1, close to the staters of Group IIIb. However, coin J-L 6/TCWH I 3 lacks the soft-serve ice cream curl shared by coin J-L 4/TCWH I 1 and most of the Group IIIb coins. There is no reason why a double exergual line could not have appeared in the middle as well as the end of the Group IIIa series, thus coin J-L 6/TCWH I 3 does not invalidate the coin sequence proposed here for the gold staters of Group IIIa.

Assuming that this coin chronology is correct, an interesting pattern emerges in Table 1. Rows denoting coins with one or two pellets have a total of 25% world maps, whereas rows denoting coins with three to five pellets have a total of 66% maps. Admittedly the sample size is small, but there does seem to be a trend toward improvement in the quality of the map pattern later in the Group IIIa series. Did a purely decorative pattern early in the series subsequently evolve into a map? Or was the pattern always meant to be a map (most of the unclear exergue patterns have the central dot I have interpreted as Sardinia), but over time the stylization improved? Or should the map hypothesis be abandoned altogether in favor of a highly abstract but exclusively textual inscription that reads "Carthage"? The answers to these and other questions regarding these coins and their curious patterns must await the coming to light of more coins (and better preserved coins) in the Group IIIa series.

The decoding of the gold stater inscription has important implications for study of these coins. First, reading the inscription as "Carthage" probably vindicates Jenkins and Lewis' contention(21) that the coins were minted at Carthage rather than at Sicily(22) or

Sardinia(23) (unless the name "Carthage" was also used on coins struck at other mints or other "New Cities," which remains a possibility).

Second, what becomes of the map hypothesis? The degree of stylization of the inscription in the gold coins is extreme for Phoenician coins of any era. Rather than being a celator's error or a die blunder, however, this stylization was completely controlled and quite intentional as indicated by the series of progressive stylization shown in Figure 1 (1-6).

As shown by the conversion of a Punic *t* into an eye in coin J-L 8-3, the letters in these inscriptions could be modified to portray other images. This could even be viewed as a Africanization of Punic writing, similar to the distortion of animal images in African petroglyphs to portray rain creatures with strange proportions(24). Thus, it is still possible that the exergue pattern in the gold coins represents a Punic world map, in which case Punic letters have been distorted to create the map pattern.

A map hypothesis is also possible for the (less stylized) inscriptions on the silver coins. In discussing these coins, Mildenberg(25) noted the somewhat unusual nature of these inscriptions; in his words they resembled "a thin pearl necklace" (translation mine: "Außen feiner Perlkreis"). In discussing the map hypothesis for the exergue pattern in the gold coins (and unaware at the time of Mildenberg's writings concerning the silver coin inscription), I wrote(26):

[The celator] was evidently taking advantage of the circular outline of

the coin die and using it as a graphical convention to project a great circle of the globe. The horse stands on the chord linking South America to Southeast Asia. The ports of call are strung out on an arc of this great circle like beads on a necklace.

The letters in the "tablet" inscription (as it is referred to in SG) on the silver coins may represent ports of call from east to west. Decipherment of the gold stater inscription may, rather than falsifying the map interpretation, ultimately support the exergue map hypothesis.

This may be especially so since the only other known Phoenician map bears an interesting relationship to the exergue patterns. A Phoenician bronze bowl from the 8th century BC (Figure 2) is a cartographical representation of the world(27). On this bowl, four arrays of stylized mountains radiate away from an elongate, central body of water with islands. The largest island functions as a central dot, serving as a "centering point" for the bowl map in the same way that the central dot forms a centering point for the exergue pattern(28). The bowl map may be a prototype for the coin-maps(29).

The case is far from settled, however; the map hypothesis remains conjectural and in fact we have no idea why the Carthaginians stylized these exergue images to such an extreme degree. Space limitations are not a factor-judging from the tiny, finely detailed goat's head in the exergue of coin J-L 22, the celators could easily have rendered the inscription as clear letters on the gold coins. They had some other purpose in mind. It has been argued that the strongest evidence in

favor of the map hypothesis for the exergue pattern in the Carthaginian coins is the fact that Greeks also used maps on coins. The hinterland of Ephesus(30) appears on the reverse of coins minted during the 4th century BC (similar to the age of the Carthaginian coins discussed here).

The Farley Coins

A related series of coins, most bearing a Punic inscription, have been described from diverse places in North America (Figure 3) by Gloria Farley(31) and others(32). These very curious coins (Figure 4) would, if taken at face value, so to speak, provide direct evidence for Phoenician involvement in North American affairs in antiquity. One interpretation of the Phoenician inscription on these coins is as a statement entitling the bearer to a land allotment in the New World(33).

If true, this would be an astonishing revelation, but questions remain regarding the authenticity of these coins. Two new arguments have surfaced regarding these coins: one involves die axis, the other involves the process of electrotyping.

Die axes of the Farley coins is variable, and fortunately may be measured in specimens known only from photographs as long as they have holes in them so that the two sides may be matched. I accomplished this by tracing the outline of each side of each Farley coin from its photograph, drawing an up arrow on the tracing, and then drawing in a small circle on the tracing showing the position of the hole. Next, I glued the obverse tracing to the back side of the reverse tracing, being

careful to match up the holes. From there it was simple to measure the die axis from the paper coin proxy. I currently have the Arkansas, Pennsylvania and Tennessee coins, and was able to measure die axis directly from them.

Following are the die axis measurements of the Farley coins, reported in degrees clockwise from the vertical. The Tennessee and Pennsylvania coins have vertical axes (no displacement). The Kansas, Nebraska, Georgia and Alabama coins have roughly 12 degree displacement (Alabama is only an estimate, it has no hole). The latter three coins are struck from the same obverse and reverse dies. The Connecticut coin, also struck from these dies, could not be measured as it has no hole and I lack good photographs, but it may also have something like 12 degree displacement.

The Arkansas coin has the most displacement of the series at 33 degrees. Although it seems to be a unique specimen from this set of dies, it is interesting that it has significant die axis displacement. Either it was struck from loose dies using the Sicilian process (perhaps not too surprising, since other coins in the series have obverse inscriptions mentioning Syracuse) or from fixed dies improperly placed. I see the former possibility as more likely, and thus I interpret the die displacement of the Arkansas coin as evidence supporting the authenticity of the coin.

I included(34) the Tennessee coin as one of the Farley coins primarily because of where it was found and because it has a retrograde "n" (in an inscription on the obverse) in common with the Pennsylvania coin. The Tennessee coin,

however, may be an electrotype made from a Syracusan dekadrachm. In electrotyping, a silver shell of the obverse and reverse is made using an electroplating process applied to a wax impression of the coin, the two shells are joined together, and are then filled with molten base metal to form a reproduction. Electrotypes of this sort were made in the 19th century AD by the British Museum and other museums(35). Although silver plated copies were made in antiquity (R. Doty, personal communication, 1999), whether or not the ancients were able to do electrotyping is another matter. This consideration calls into question the antiquity of the Tennessee coin. The Tennessee coin may have no connection to the other Farley coins, and any resemblances to the struck Farley coins may be coincidental (indeed, only the struck Farley coins have the Punic inscriptions on the reverse). These could be

The work of counterfeiters (36) experimenting in a variety of metallic media, and then mischievously distributing their creations across the country. It is hard to imagine why someone would go to all the trouble of doing this, however, so at this point I am still leaning toward an interpretation of authenticity for the Farley coins. The question of the antiquity/authenticity of the Farley coins is at present still an unsolved problem. They are either genuinely ancient or an astonishingly skillful hoax.

To conclude, we may hope that a key piece of evidence will soon be surfacing from the bottom of the Mediterranean. Meanwhile, please contact me if you have further information concerning Carthaginian gold staters of J-L Group IIIa or additional information concerning the Farley coins, especially unpublished examples.

Figure Captions

Figure 1. Evolution of the Punic word Carthage on Gold and Silver Coins from 410-320 BC.

1, Punic inscription qrthdsht as it appears on the obverse of Carthaginian silver tetradrachms of type SG 6426. The Punic letters are clearly legible.

2, Punic inscription qrthdsht as it appears on a Carthaginian silver tetradrachm of type SG 6427. The letters have been somewhat stylized and the spacing is irregular. British Museum Carthage PCG III C. 40, PS 197869.

3, Punic inscription qrthdsht as it appears on a second Carthaginian silver tetradrachm of type SG 6427. The letters have a stylization similar to the coin previous. British Museum Carthage PCG III C. 40 AR, R4835/32, PS 061565.

4, Punic inscription qrthdsht as it appears on a Carthaginian gold stater of Group IIIa, coin Jenkins-Lewis 6. Although the inscription is heavily stylized, the Punic letters (especially the h) are still recognizable. This coin has two pellets on the reverse and is thus early in the Group IIIa series.

5, Punic inscription qrthdsht as it appears on a Carthaginian gold stater of Group IIIa, coin Jenkins-Lewis 8-3. Note the modification of the Punic letter t into an eye. This coin has four pellets on the reverse.

6, Punic inscription qrthdsht as it appears on a Carthaginian gold stater of Group IIIa, coin Jenkins-Lewis 4. This inscription is so heavily stylized that the Punic letters are no longer recognizable, although the central dot of the t and the sh (turned on its side) are visible. The symbols may also serve to portray world geography (e.g. final t = America; central dot of central t = Sardinia; symbols to left of central dot [which are still part of the central t?] = boot of Italy [above], and triangular Sicily [below]). Interestingly, depiction of Sicily as a triangle is attested to in ancient literature (Strabo; see p. 9 in P. Whitfield, 1998, *New Found Lands: Maps in the History of Exploration*, New York, Routledge). This coin has five pellets on the reverse and is thus late in the Group IIIa series.

7, Exergue pattern as it appears on a Carthaginian gold stater of Group IIIa, coin Jenkins-Lewis 11. No letters are recognizable, and the exergue pattern has apparently been transformed into a map of the ancient world. This coin has two pellets on its reverse.

Figure 2. Phoenician bronze bowl (8th century BC; discovered in Nimrud) showing five stylized mountain ranges radiating away from a Mediterranean like body of water with islands. Goats are visible on the mountain flanks. Bowl is 24.5 centimeters in diameter; London, British Museum.

Figure 3. Map showing distribution of the Farley coins. Coins attributed to this series have been found in Alabama, Arkansas, Kansas, Pennsylvania, Connecticut, Nebraska, Tennessee and Georgia. The coins were found between the 1840's and the 1970's.

Figure 4. Sketch of the reverse of the Farley coin reputedly found in Waterbury, Connecticut in 1958. Images on this side of the coin include protome of the Carthaginian horse, a palm tree with dangling roots, an incomplete border of dots and the Punic inscription bpgrlt. Diameter of coin approximately 29 mm.

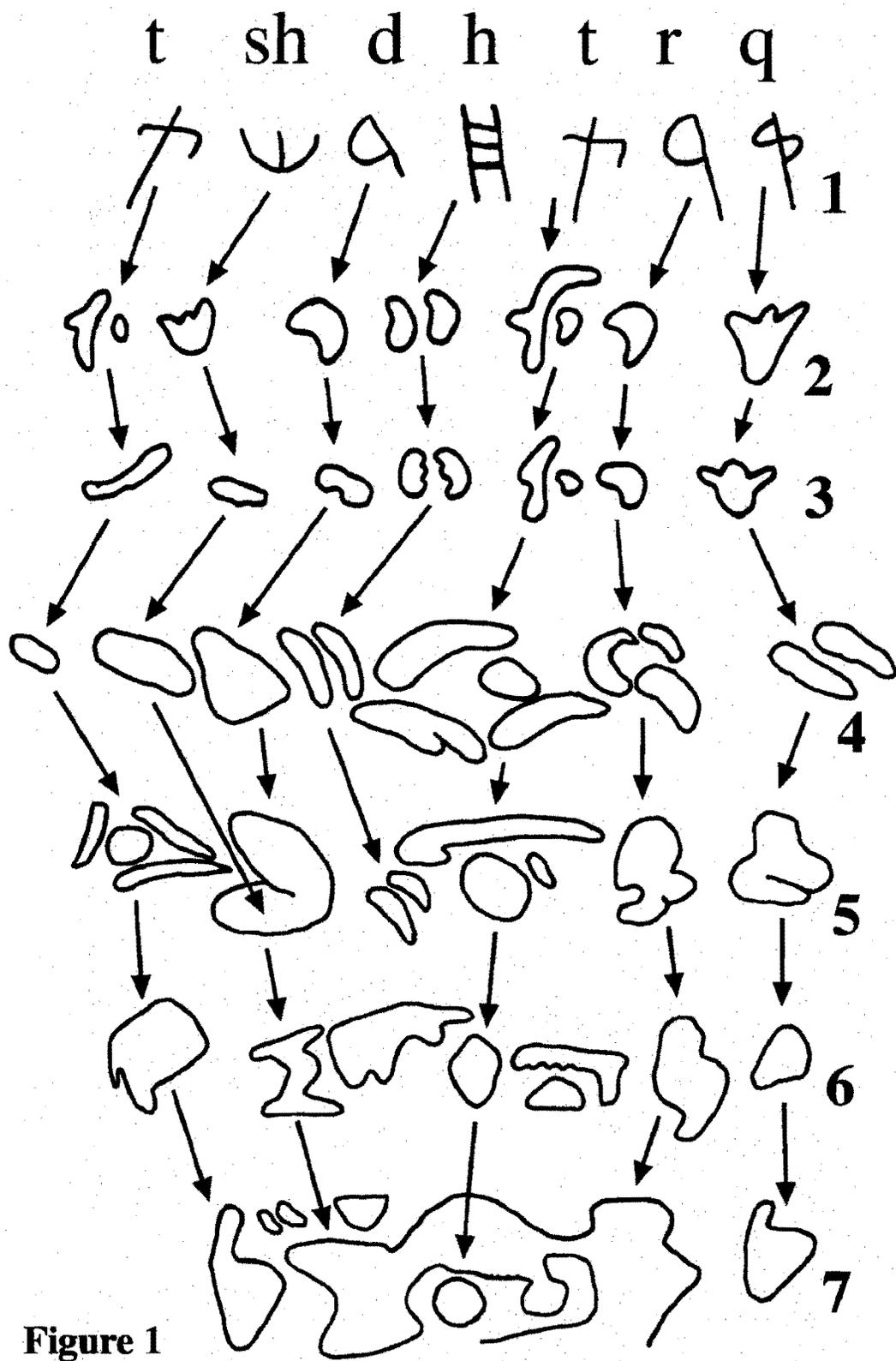


Figure 1

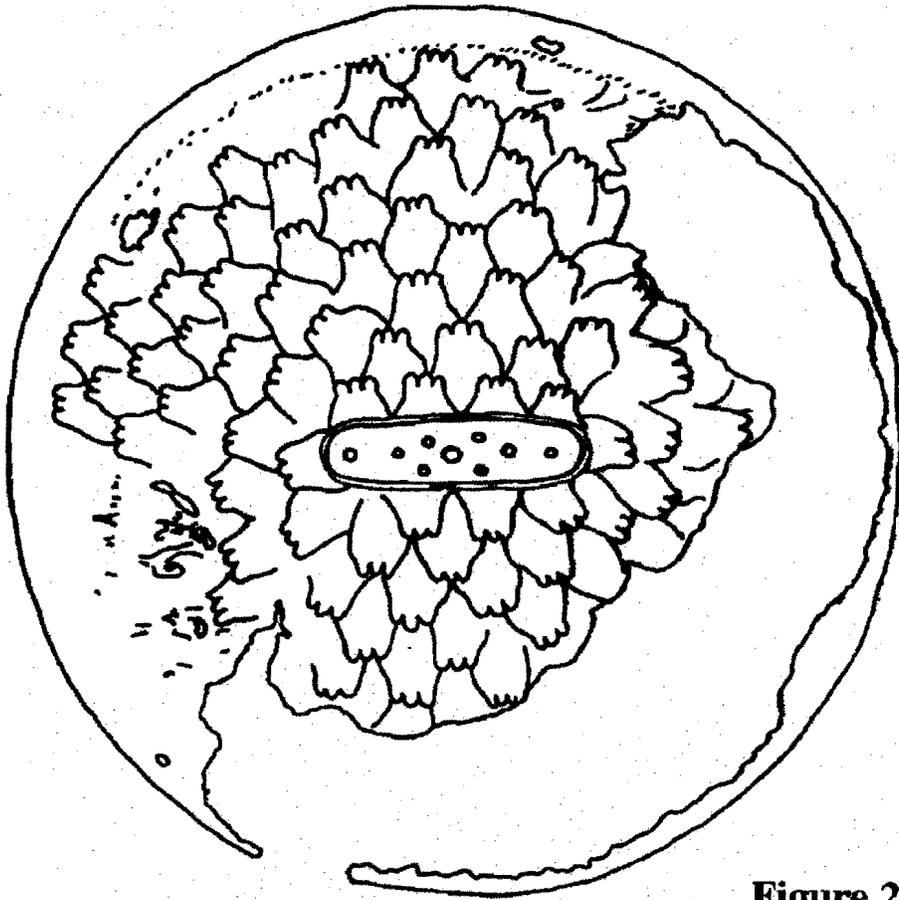


Figure 2

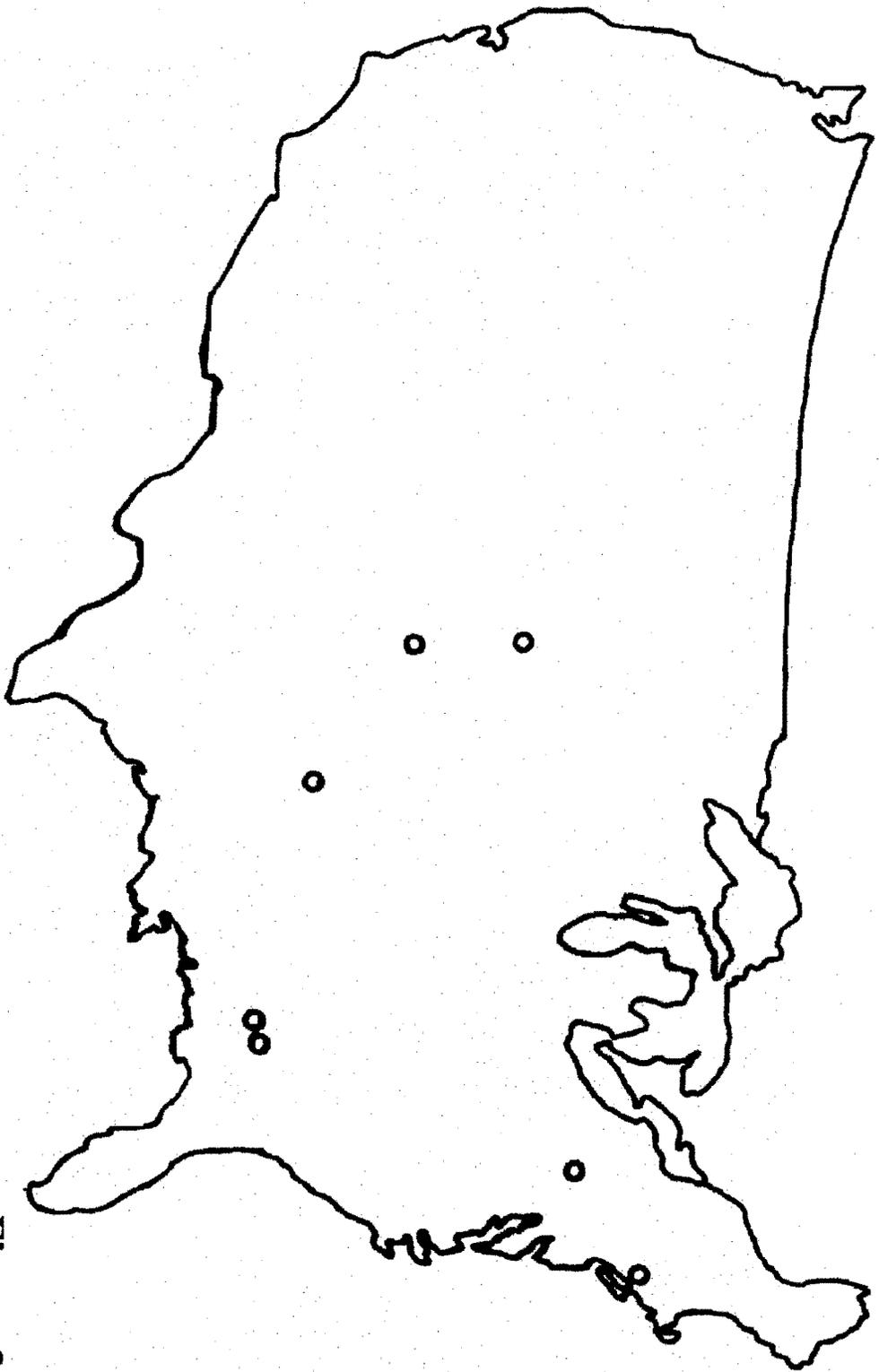


Figure 3



Figure 4

References

- 1) McMenemy, M. A. 1999. *The Carthaginians Were Here: Evidence for an Early Crossing of the Atlantic*. Volume 1. South Hadley, Massachusetts, Meanma Press.
- 2) See p. 5 in P. Whitfield, 1998, *New Found Lands: Maps in the History of Exploration*, New York, Routledge.
- 3) Anonymous, "Oldest deep sea shipwrecks ever found are discovered," *Daily Hampshire Gazette*, v. 213, n. 249, June 24, 1999, p. A4.
- 4) Phoenician cultures minted coins in gold, electrum, silver, debased silver, billon, bronze and other base metals.
- 5) M. A. McMenemy, 1996, *Carthaginian Cartography: A Stylized Exergue Map*, South Hadley, Massachusetts, Meanma Press.
- 6) M. McMenemy, 1996, *Cartography on Carthaginian Gold Staters*, *The Numismatist*, v. 109, n. 11, p. 1315-1317.
- 7) M. A. McMenemy, 1997, *The Phoenician World Map*, *Mercator's World*, v. 2, n. 3, p. 46-51.
- 8) G. K. Jenkins and R. B. Lewis, 1963, *Carthaginian Gold and Electrum Coins*, London, Royal Numismatic Society Special Publication Number 2.
- 9) L. Müller, 1977 (originally published 1860), *Numismatique de l'Ancienne Afrique*. Part II. Deuxième Volume. *Les Monnaies de la Syrtique, de la Byzacène et de la Zeugitane*, Chicago, Obol International.
- 10) Roman moneyers are known to have put their names to coinage, but this has not been demonstrated for any Carthaginian coins. See W. Phillips, 1997, *Signature series*, *Coin World*, v. 38, issue 1921, p. 34 (February 3, 1997); W. Phillips, 1997, *Getting personal*, *Coin World*, v. 38, issue 1956, p. 74 (October 6, 1997).
- 11) See p. 28 in G. K. Jenkins and R. B. Lewis, 1963, *Carthaginian Gold and Electrum Coins*, London, Royal Numismatic Society Special Publication Number 2.
- 12) A. MacGregor, Jr., *Coin of the realm*, *The Chicago Tribune*, Section 1, p. 26, February 6, 1997.
- 13) M. A. McMenemy, "What's in a Name? Decipherment of a Carthaginian Exergue Inscription," *The Celator*, in press.
- 14) SG refers to D. R. Sear, 1979, *Greek Coins and their Values*, Volume II, Asia and North Africa, Seaby, London.
- 15) This coin has an eye on the left side of the exergue space and a tiny but clearly engraved goat's head on the right side of the exergue; see p. 80 in G. K. Jenkins and R. B. Lewis, 1963, *Carthaginian Gold and Electrum Coins*, London, Royal Numismatic Society Special Publication Number 2; figure 6 in M. A. McMenemy, 1996, *Carthaginian Cartography: A Stylized Exergue Map*, South Hadley, Massachusetts, Meanma Press. This is the most valuable coin in the Carthaginian gold and electrum stater series according to p. 597 (SG 6448; ⅈ 1,250) in D. R. Sear, 1979, *Greek Coins and their Values*, Volume II, Asia and North Africa, Seaby, London.
- 16) G. K. Jenkins, 1974, *Schweizerische Numismatische Rundschau*, v. 53, p. 24.

- 17) L. Mildenberg, 1998, *Vestigia Leonis: Studien zur antiken Numismatik Isr'ls, Pal,,stinas und der "stlichen Mittelmeerwelt*. Universit,,tsverlag Freiburg Schweiz, Vandenhoeck & Ruprecht, G"ttingen.
- 18) M. A. McMEnamin, "What's in a Name? Decipherment of a Carthaginian Exergue Inscription," *The Celator*, in press.
- 19) G. K. Jenkins and R. B. Lewis, 1963, *Carthaginian Gold and Electrum Coins*, London, Royal Numismatic Society Special Publication Number 2.
- 20) Coin numbers are as follows: J-L numbers from G. K. Jenkins and R. B. Lewis, 1963, *Carthaginian Gold and Electrum Coins*, London, Royal Numismatic Society Special Publication Number 2; TCWH I numbers from McMEnamin, M. A. 1999. *The Carthaginians Were Here: Evidence for an Early Crossing of the Atlantic*. Volume 1. South Hadley, Massachusetts, Meanma Press.
- 21) G. K. Jenkins and R. B. Lewis, 1963, *Carthaginian Gold and Electrum Coins*, London, Royal Numismatic Society Special Publication Number 2.
- 22) L. Mildenberg, 1998, *Vestigia Leonis: Studien zur antiken Numismatik Isr'ls, Pal,,stinas und der "stlichen Mittelmeerwelt*. Universit,,tsverlag Freiburg Schweiz, Vandenhoeck & Ruprecht, G"ttingen.
- 23) M. A. McMEnamin, 1997, *The Phoenician World Map*, *Mercator's World*, v. 2, n. 3, p. 46-51.
- 24) A. Solomon, 1996, *Rock Art in Southern Africa*, *Scientific American*, v. 275, p. 106-113.
- 25) See p. 356, figure caption 2 in L. Mildenberg, 1998, *Vestigia Leonis: Studien zur antiken Numismatik Isr'ls, Pal,,stinas und der "stlichen Mittelmeerwelt*. Universit,,tsverlag Freiburg Schweiz, Vandenhoeck & Ruprecht, G"ttingen.
- 26) See p. 11 in M. McMEnamin, 1996, *Cartography on Carthaginian Gold Staters*, *The Numismatist*, v. 109, n. 11, p. 1315-1317.
- 27) Moscati, S., 1988, *Metals bowls*, p. 436-447 in S. Moscati, ed., 1988, *The Phoenicians*, New York, Abbeville Press.
- 28) R. G. Doty, 1997, *Counterfeit Currency*, *Mercator's World*, v. 2, n. 4, p. 46-49.
- 29) McMEnamin, M. A. 1999. *The Carthaginians Were Here: Evidence for an Early Crossing of the Atlantic*. Volume 1. South Hadley, Massachusetts, Meanma Press.
- 30) A. E. M. Johnston, 1967, "The earliest preserved Greek map: a new Ionian coin type," *Journal of Hellenic Studies*, v. 87, p. 86-94; A. E. M. Johnston, 1971, "Maps on Greek coins of the 4th century B.C.," *Imago Mundi*, v. 25, p. 75.
- 31) G. Farley, 1994, *In Plain Sight: Old World Records in Ancient America*, Columbus, Georgia, ISAC Press.
- 32) McMEnamin, M. A. 1999. *The Carthaginians Were Here: Evidence for an Early Crossing of the Atlantic*. Volume 2. South Hadley, Massachusetts, Meanma Press.
- 33) McMEnamin, M. A. 1999. *The Carthaginians Were Here: Evidence for an Early Crossing of the Atlantic*. Volume 2. South Hadley, Massachusetts, Meanma Press.
- 34) McMEnamin, M. A. 1999. *The Carthaginians Were Here: Evidence for an Early Crossing of the Atlantic*. Volume 2. South Hadley, Massachusetts, Meanma Press.
- 35) See lots 2337 and 2338 on page 245, *Classical Numismatic Group Mail Bid Sale 49*, Closing Wednesday, March 17, 1999, Lancaster, Pennsylvania and London.

36) McMenemy, M. A. 1999. *The Carthaginians Were Here: Evidence for an Early Crossing of the Atlantic*. Volume 2. South Hadley, Massachusetts, Meanma Press.

Publications on the subject of Phoenicians and Phoenician Exploration

What's in a name? Decipherment of a Carthaginian exergue inscription. **The Celator**, in press.

The Carthaginians Were Here: Evidence for an Early Crossing of the Atlantic. Volume I. South Hadley, Massachusetts: Meanma Press. ISBN 0-9651136-4-7 (2 Volume set ISBN 0-9651136-6-3). 1999.

The Carthaginians Were Here: Evidence for an Early Crossing of the Atlantic. Volume II. South Hadley, Massachusetts: Meanma Press. ISBN 09651136-5-5 (2 Volume set ISBN 0-9651136-6-3). 1999.

The Phoenician world map. *Mercator's World* 2:46-51. (cover story). 1997.

An Introduction to Phoenician Grammar. South Hadley, Massachusetts: Meanma Press ISBN 0-9651136-3-9. 1997.

A Concise Phoenician-English English-Phoenician Dictionary. South Hadley, Massachusetts: Meanma Press. ISBN 0-9651136-2-0. 1997.

Cartography on Carthaginian Gold Staters. **The Numismatist** 109: 1315-1317. 1996.

Carthaginian Cartography: A Stylized Exergue Map. South Hadley, Massachusetts: Meanma Press. 26p. ISBN 0-9651136-1-2. 1996.

THBO TSRM ADRNM WOD TSORNM. South Hadley, Massachusetts: Meanma Press. 24p. ISBN 0-9651136-0-4. (in Phoenician). 1996.

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