

Zeitschrift: Schweizerische numismatische Rundschau = Revue suisse de numismatique = Rivista svizzera di numismatica
Herausgeber: Schweizerische Numismatische Gesellschaft
Band: 85 (2006)

Artikel: Coins with the Armaic legend ŠHRW and other unrecorded Samaritan issues
Autor: Gitler, Haim / Tal, Oren
DOI: <https://doi.org/10.5169/seals-177867>

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

Download PDF: 11.12.2025

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>

HAIM GITLER/OREN TAL

COINS WITH THE ARAMAIC LEGEND ŠHRW
AND OTHER UNRECORDED SAMARIAN ISSUES*

PLATES 5–8

I. Coins with the Aramaic legend ŠHRW

In 1984, when M. Rizack published an obol bearing the legend Šhrw (Pl. 5, 1a),¹ he explained the Aramaic root šhr as ‘moon or crescent’, and noted that Geshem, the Arab,² a contemporary of Nehemiah (Nehemiah 2:19; 6:1-2, 9) was the son of Šhrw I. Šhrw II (who in his opinion is the Šhrw who issued this coin) was the father of Ḥāni’aus (Hn-’s) I, the King of Liḥyān, an ancient kingdom in Ḥejaz in north-west Saudi Arabia.³

In 1999, Meshorer and Qedar proposed an alternative attribution and incorporated this obol into the Samaritan coinage of the fourth century BC. They based their argument on the coins’ alleged find spot in northern Israel and their fabric, similar to that of the Samaria issues. Furthermore, they proposed that the legend on this coin-type could denote the personal name of a local fourth century BC

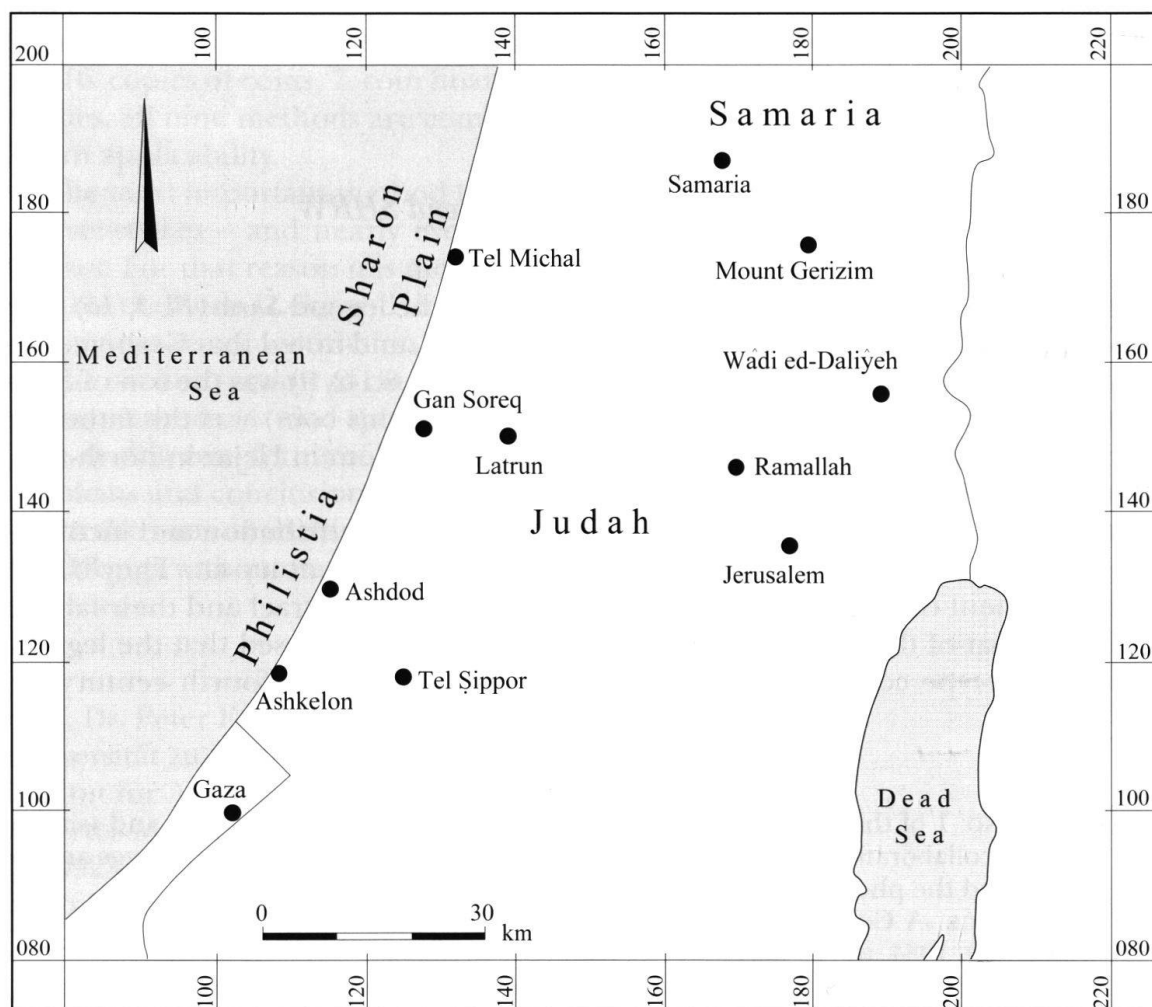
* Section No. 1 of this article was written in collaboration with S.N. Gerson and section No. 3 in collaboration with A. Shugar, M. Notis and M. Ponting. The drawings are by P. Arad and the photographs by Z. Radovan.

¹ M.A. RIZACK, A Coin with the Aramaic Legend ŠHRW, a King-Governor of Liḥyān, ANSMN 29, 1984, pp. 25-28.

² Recently Huth and Qedar proposed to identify a North Arabian Athenian-styled drachm, bearing the Aramaic legend – (G)šm – as belonging to Geshem, see M. HUTH/S. QEDAR, A Coin from North Arabia with an Aramaic Inscription and Related Coins of the Incense Road, NC 159, 1999, especially pp. 295-297.

³ Rizack brought evidence for the personal name Šhrw in an inscription from Dedan (present-day Al Ula) in northern Saudi Arabia, see A. JAUSSEN/R. SAVIGNAC, Mission Archéologique en Arabie: De Jérusalem au Hedjaz Médain-Saleh, vol. I (Paris 1909), p. 241, No. 166, Pl. 28, and in a Nabatean inscription documented in the Ḥejaz, see F.V. WINNETT/W.L. REED, Ancient Records from North Arabia (Toronto 1970), p. 147, No. 33. In 1986, Cross published an Aramaic stele from Taymā’ (located in Saudi Arabia north-east of the Ḥejaz) mentioning Psgw Šhrw which he identifies as Šhrw II although he was not familiar with Rizack’s publication, see F.M. CROSS, A New Aramaic Stele from Taymā’, Catholic Biblical Quarterly 48, 1986, pp. 390-392. In this respect Farès-Drappeau rejected the identification of Šhrw (I) as Šhr the father of Gšm, see S. FARÈS-DRAPPEAU, Dédan et Liḥyān: Histoire des Arabes aux confins des pouvoirs perse et hellénistique (IV^e-II^e s. avant l’ère chrétienne), Travaux de la Maison de l’Orient et de la Méditerranée 42 (Lyon 2005), pp. 120-121.

governor.⁴ An unpublished obol, struck from the same pair of dies, in the numismatic collection of the Hebrew University of Jerusalem, depicts a full portrait on the obverse (*Fig. 1, Pl. 5, 1b*).⁵ It corroborates Rizack's identification of the figure as a youth rather than Heracles as proposed by Meshorer and Qedar.



Map of Palestinian sites mentioned in the article

⁴ Y. MESHORER/S. QEDAR, *Samarian Coinage*, *INS Numismatic Studies and Researches* 9 (Jerusalem 1999, henceforward MESHORER/QEDAR), pp. 27-28, 94, No. 60, Pl. 10. Eshel's revised list of the governors of Samaria based on the Wādi ed-Dāliyah papyri and Samarian coins published prior to Meshorer and Qedar's publication does not include the name *Šhrw*, see H. ESHEL, *The Rulers of Samaria during the Fifth and Fourth Centuries BCE*, *Eretz-Israel* 26, 1999, pp. 8-12 (Hebrew; English summary, p. 226*).

⁵ We are grateful to D. Barag and the Institute of Archaeology for permission to publish this coin, which is a gift of D. Hendin given in 1997 in memory of his father A. Hendin.

Obols

- 1 *Obv.* Head of youth to l.
Rev. Owl to l., head facing. In upper r. field olive spray and crescent; on r. AΘE (with retrograde A) and the legend Šhrw on left. Incuse square.
 - a AR, 0.48 g, 8 mm, 6.00; American Numismatic Society, No. 1982.28.1 (*Pl. 5, 1a*).
 - b AR, 0.59 g, 7 mm, 7.00; Hebrew University of Jerusalem, No. 6387 (*Fig. 1; Pl. 5, 1b*).



Fig. 1. Coin 1b (*obv.*)



Fig. 2. Composite drawing of the *rev.* of coins 2a and 2b.

Recently an obol of a new coin-type with the Aramaic legend 𐤑𐤕𐤒𐤠 = Šhrw was found in the excavations of Gan Soreq, a site located in northern Philistia, some 6 km off the sea-coast. The coin is a surface find that was found together with pottery of Persian and Hellenistic date. This new coin-type can be added to two specimens struck from the same pair of dies. They came from the antiquities market and were acquired by G. Chaya and S.N. Gerson. Both were allegedly found in Palestine (*Fig. 2*).

- 2 *Obv.* Helmeted head of Athena to r.
Rev. Owl to r., head facing; the far side wing is seen next to the owl's upper r. body and reappears in the l. field below. In upper l. field olive spray and linear crescent; on r., Šhrw. Incuse square (*Fig. 2*).
 - a AR, 0.65 g, 8 mm, 5.00; G. Chaya collection⁶ (*Pl. 5, 2a*).
 - b AR, 0.70 g, 8 mm, 6.00; S.N. Gerson collection (*Pl. 5, 2b*).
 - c AR, 0.64 g, 8 mm, 10.00; Israel, Antiquities Authority, No. 110266.⁷

⁶ We are grateful to G. Chaya, Jerusalem, for permission to publish this coin.

⁷ The excavations at Gan Soreq were directed by U. 'Ad and A. Dagot on behalf of the Israel Antiquities Authority (IAA) (cf. <http://www.hadashot-esi.org.il/reports.asp> [vol. 118]). We are grateful to them and to D.T. Ariel, Head of the Coin Department of the IAA, for permission to mention this coin.

Scholars have tried to link several Philistian,⁸ Samaritan and Yehud coin-types, bearing isolated letters and legends, as standing for the personal names of officials who minted coins under Achaemenid rule.⁹ Some of the suggested attributions might be valid, since the legends are explicit and the figures known from historical accounts. However, in most cases we are unable to determine, beyond any reasonable doubt, whether these names correspond to a specific personage. Accordingly, we find it difficult to accept both identifications put forward by Rizack and later by Meshorer and Qedar. However, the finding of obol 2c in a controlled archaeological excavation and the alleged provenance of the additional four *Šhrw* obols (Nos. 1a-b, 2a-b), support their attribution to a local Palestinian mint.¹⁰ The fact that coin 2c was found at a site located within the geographical distribution area of

⁸ The coins of Philistia are commonly known in the scholarly literature as ‘Philisto-Arabian’, a term coined by G.F. HILL (BMC Palestine, p. lxxxiii-lxxxix, 176-183). The current terminology, hereby suggested, refers to the geographical region of the minting authorities and the iconographical sphere of motifs depicted on these coins.

⁹ Cf. e.g. Philistian coin-types with isolated *beth* or *beth yod*, as standing for the governor Bagoas, see Y. MESHORER, *Ancient Jewish Coinage*, vol. I (New York 1982), pp. 27-28; A. LEMAIRE, *Le trésor d’Abu Shusheh et le monnayage d’Ashdod avant Alexandre*, RN 32, 1990, pp. 262-263, or alternatively the eunuch Batis, see E. BABELON, *Perses Achéménides* (Paris 1893), p. lxiv, No. 132. For personal names on Samaritan coins see MESHORER/QEDAR, pp. 20-29. For such names on Yehud coins, see B. BAR-KOCHVA/A. KINDLER, *The Hezekiah Coins*, in: B. BAR-KOCHVA, *Pseudo-Hecataeus, ‘On the Jews’: Legitimizing the Jewish Diaspora* (Berkeley 1996), pp. 255-270.

¹⁰ The personal name *Šhrw* as a derivative of *šhr*, and with its *waw* suffix is clearly Arabic. Harding recorded *šhr* and its derivatives in many Liḥyānic (2×), Safaitic (20×), Thamudic (6×), Minean (2×), Qatabanian (39×) and Sabeian (2×) inscriptions, see G. L. HARDING, *An Index and Concordance of Pre-Islamic Arabian Names and Inscriptions* (Toronto/Buffalo 1971), pp. 360-361. For the Qatabanian personal names see also H. HAYAJNEH, *Die Personennamen in den qatabānischen Inschriften* (Hildesheim 1998), p. 173. *Šhrw* appears in Nabatean inscriptions as well, see e.g. A. NEGEV, *Personal Names in the Nabatean Realm*, Qedem 32 (Jerusalem 1991), p. 62, No. 1112, though some of his parallels are partially irrelevant. In this respect it is worth to mention that *Šhrw* appears also as a graffito on a tetradrachm of Alexander from a hoard (IGCH 1514) found in Tel Šippor (Philistia), see J. ELAYI/A. LEMAIRE, *Graffiti et contremarques ouest-sémitiques sur les monnaies grecques et proche-orientales*, Glaux 13 (Milan 1998), p. 43, No. 22, Pl. 8, Fig. 1. It should be stressed, however, that we can not entirely rule out the possibility that the name on obols 1 and 2 is *Šhdw*, since *resh* and *daleth* in Aramaic script are more than often similar. It is worth noting that Lemaire suggested another possible reading for the coin published by MESHORER/QEDAR (above, n. 4, no. 60), that is *Šhrn*, since the last letter could in his opinion be read as *nun*, see A. LEMAIRE, *Récensions: Y. MESHORER et S. QEDAR, Samarian Coinage*, (Jerusalem 1999) in: *Transeuphratène* 24 (2002), p. 153. We therefore asked A. Lemaire to examine the legend appearing on our new coin-type (No. 2a-b). Although the reading is not definite, Lemaire believes that the shape of the final letter looks more like *waw* rather than *nun*. We thank R. Zadok and A. Lemaire for bringing to our attention some of the above references.

the coinage of Philistia suggests that the Šhrw coin-types were struck in Philistia.¹¹ However, since the practice of adding a complete personal name has not been recorded so far on coins of Philistia, and since such names on Yehud coinage are Jewish, the most likely candidate to have issued these coins is the mint of Samaria as suggested previously by Meshorer and Qedar. Further evidence for a local origin may come from the coins' fabric and flan, while it is precarious to take these characteristics; regional, Palestinian coins of the Persian period seem to differ in these parameters from those of neighboring regions. Although the presence of an Arabic name on coins of Samaria is unusual, the fact that the Arabic element was not foreign to the populations of Palestine at the time may explain its appearance. An additional point in support of the attribution to Samaria is the relative low silver content of obol 2a (90.9%) and a notably high percentage of copper (7.66%) (see Table 1). These figures fit well within the average results for the analyzed Samarian coins as opposed to the results for the Philistian issues.

II. Unrecorded Samarian Issues

The following section includes seventeen Samarian issues. The first fourteen (Nos. 3-16) are unrecorded coin-types or variants, whereas the remaining three (Nos. 17-19) are better preserved specimens of published coins.¹²

Obols

- 3 *Obv.* Female head to l. with straight hair and a ribbon (*Fig. 3*).
 Rev. Owl to r., head facing; in upper l. field olive spray and crescent, on r. AΘ[E]
 incuse square.

AR, 0.51 g, 7 mm, 3.00; Israel Museum, No. 24584 (*Pl. 6, 3*).

¹¹ According to the archaeological finds, the geographic distribution of the coinage of Philistia is restricted to southern Samaria, Judah and the southern Palestinian coast (southern Sharon Plain and Philistia), see H. GITLER/O.TAL, *The Coinage of Philistia in the Fifth and Fourth Centuries BC: A Study of the Earliest Coins of Palestine*, *Collezioni Numismatiche* 6 (Milan 2006), pp. 49-51.

¹² The present contribution does not intend to bring forward all previously unrecorded coin-types found after MESHORER/QEDAR's publication. It is an addendum based on coins recently acquired by the Israel Museum (with the exception of Nos. 8, 10, 11b-11c, 15-16).

- 4 *Obv.* Female head to l. with straight hair and a ribbon (*Fig. 4*).
 Rev. Owl to r., head facing; to r. AΘ[E]. Incuse square.
 AR, 0.76 g, 6 mm, 3.00; Israel Museum, No. 24585¹³ (*Pl. 6, 4*).



Fig. 3. Coin 3 (*obv.*)

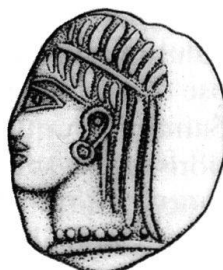


Fig. 4. Coin 4 (*obv.*)

Fractions

- 5 *Obv.* Forepart of lion with outstretched forelegs to r.; in upper l. field, traces of a letter(?). Border of dots.
 Rev. Bearded male head to r. Circular incuse.
 AR, 0.14 g, 3 mm, 3.00; Israel Museum, No. 15619 (*Pl. 6, 5*).
- 6 *Obv.* Crouching lion to r. Border of dots.
 Rev. Griffin to r. Circular incuse with border of dots.¹⁴
 AR, 0.18 g, 3.5 mm, 9.00; Israel Museum, No. 15620 (*Pl. 6, 6*).
- 7 *Obv.* The Persian Great King kneeling to r., wearing kidaris and kandys; in his l. hand bow, in r. spear. Circular linear border.¹⁵
 Rev. Forepart of a winged animal with a bearded male head to r. Circular incuse.
 AR, 0.09 g, 3 mm, 12.00; Israel Museum, No. 15621 (*Pl. 6, 7*).

¹³ A second obol of this type is kept in the D. Menchell collection, New York (0.60 g; 9 mm, 12.00).

¹⁴ Another representation of a griffin on a Samarian coin appears in MESHORER/QEDAR, No. 134.

¹⁵ This image is common on Samarian coins, cf. MESHORER/QEDAR, Nos. 32, 97, 101, 105, 197, 205.

- 8 *Obv.* Head of lion facing. Border of dots.¹⁶
 Rev. Forepart of a horned horse with bent foreleg to r.¹⁷
 AR, 5 mm, 9.00; G. Chaya collection (*Pl.* 6, 8).

- 9 *Obv.* Bes head facing. Border of dots.¹⁸
 Rev. Forepart of a horse with forelegs stretched forward to r.¹⁹
 AR; 0.10 g, 5 mm, 2.00; Israel Museum, No. 16165 (*Pl.* 6, 9).

Hemiobol

- 10 *Obv.* Bearded male head to r., surmounted by forepart of a lion as a head-cover. Guilloche border.²⁰
 Rev. Forepart of a horse with bent forelegs to r.; in upper l. field Š. Incuse square with border of dots.²¹
 AR, 0.25 g, 4 mm, 12.00; Private collection (*Pl.* 6, 10).

Obol

- 11 *Obv.* Bearded male head to l., surmounted by a head of a lion as a head-cover (Heracles?).²²
 Rev. Owl r., head facing; in upper l. field olive spray and crescent. Incuse square.
 AR, 0.45 g, 6.5 mm, 3.00; Israel Museum, No. 15622²³ (*Pl.* 7, 11a).

¹⁶ We are grateful to G. Chaya, Jerusalem, for permission to publish this coin.

¹⁷ The obverse motif is similar to that on a Samarian hemiobol, see MESHORER/QEDAR, No. 171.

¹⁸ The obverse motif is almost identical to that of a Samarian issue, see MESHORER/QEDAR, No. 54. The frontally depicted Bes motif also appears on Nos. 53, 120, 152-153, 179, 180, 198.

¹⁹ This image is common in Samarian coins, see MESHORER/QEDAR, p. 58. The reverse motif is almost identical to that of Nos. 43, 75-76.

²⁰ The obverse motif is similar to that appearing on a Samarian drachm and an obol, see MESHORER/QEDAR, Nos. 34-35.

²¹ This image is common in Samarian coins, see above n. 19. This horse composition most probably imitates coins of Gaza of Philistian style, see GITLER/TAL (above, n. 11), Coin-types VI. Gaza 1-12 and in particular VI. Gaza 6 O.



²² We are grateful to G. Chaya for providing us photographs of coins 11b and 11c (*Pl.* 7, 11b, 11c). In coin 11b the legend [A]ΘE is visible.

²³ The obverse motif identified by MESHORER/QEDAR with Heracles appears on three other coin-types (Nos. 107-109), but with a different reverse motif.

Hemiobol

- 12 *Obv.* Forepart of a lion crouching to r.²⁴
Rev. Triple bearded male head with a cone-shaped laureated head-cover, forming an elusive composition of two heads in profile (r. and l.) and a frontal head in between. Incuse square.²⁵
 AR, 0.23 g, 5 mm, 12.00; Israel Museum, No. 24867 (*Pl.* 7, 12).

Obols

- 13 *Obv.* Helmeted head of Athena to r.
Rev. Owl to r., head facing; in upper l. field, olive spray and crescent; on r., outwards from top to bottom,  = *Bdyh*.
 AR, 0.64 g, 7 mm, 5.00; Private collection²⁶ (*Pl.* 7, 13).
- 14 *Obv.* Galley to l. over a wavy line pattern; in field above, Phoenician *beth*. Circular border of dots.
Rev. The Persian Great King to r., wearing kidaris and kandys, fighting an upright lion by seizing its forelocks with his raised l. hand and holding a dagger in r.; between the two figures a linear device  composed of three lines issuing from a circle. Incuse square.
 AR, 0.64 g, axis 6; 8 mm, 6.00; Israel Museum, No. 16191²⁷ (*Pl.* 8, 14).

²⁴ The obverse motif is similar to that appearing in two Samarian obols, see MESHORER/QEDAR, Nos. 83, 85. It is also comparable to a Cilician issue of an uncertain mint (SNG Switzerland I: Levante-Cilicia [Bern 1986], Pl. 11, 215).

²⁵ The reverse motif is identical to that appearing in another Samarian hemiobol, see MESHORER/QEDAR, No. 139 and No. 17 below. The motif is also comparable to Cilician issues of an uncertain mint (SNG Levante [see previous note], Pl. 11, 201-203). It also appears on a Carthaginian bulla of the same period, see D. BERGES, Die Tonsiegel aus dem karthagischen Tempelarchiv, in D. BERGES/W. EHRHARDT/A. LAIDLAW/F. RAKOB, Die Deutschen Ausgrabungen in Karthago, vol. II (Mainz am Rhein 1997), p. 145, No. 421, pl. 76. Additional elusive (or optical trickery) motifs are known also from Greek coinage. Notably among those are types from Lesbos in general (e.g. BMC, Troas, Aeolis and Lesbos, Pl. 30, obverse of No. 20) and from Mytilene (e.g. F. BODENSTEDT, Die Elektronmünzen von Phokaia und Mytilene [Tübingen 1981], Pl. 54, reverse of Nos. 55 α-γ, 62), as well as contemporaneous Philistian issues.

²⁶ For a similar coin-type see MESHORER/QEDAR, Nos. 8-9, and for the name pp. 20-21. The setting of the letters on this new obol is different and the style of the scene is more refined. Both names, *Bdyh* and *Šhrw*, are not known from contemporary Samaria-oriented sources. It is thus difficult to know whether these persons had a specific role in the Samarian administration during the fourth century BC (governors, priests and the like), and when and where exactly they operated (ESHTEL, above n. 4, pp. 10-11). The personal name *Bdyh* has a Phoenician prefix and a Yahwistic suffix. The name appears in Ezra 10:35 in the context of Judean (Israelite) families whose sons trespassed against their God by marrying gentile women.

²⁷ The attribution of this obol to Samaria is uncertain. As a whole it represents one of the most common coin-types of Sidon, cf. J. ELAYI/A.G. ELAYI, Le monnayage de la cité

Hemiobols

- 15 *Obv.* Bearded male head to l., wearing tiara.²⁸
Rev. Owl to r., head facing; in upper field, olive spray; to r., AΘ[E]. Incuse square.
 AR, 0.21 g, 7 mm, 9.00; Private collection (*Pl. 8, 15*)
- 16 *Obv.* Ram's head l. Border of dots. (*Fig. 5*)
Rev. Dolphin l. Border of dots.
 AR, 0.60 g, 7 mm, 4.00; G. Chaya collection.²⁹ (*Pl. 8, 16*)


Fig. 5. Coin 16 (*obv.*)


Fig. 6. Coin 17

- 17 *Obv.* Triple bearded male head with a cone-shaped laureated head-cover, forming an elusive composition of two heads in profile (r. and l.) and a frontally depicted head in between. Border of dots.
Rev. Bearded Heracles, resting his r. arm on a shield and holding club in l. hand. Border of dots.
 AR, 0.28 g, 5 mm, 2.00 ; Israel Museum, No. 24586³⁰ (*Fig. 6; Pl. 8, 17*).

phénicienne de Sidon à l'époque perse (Ve-IVe s. av. J.-C.), Transeuphratène, Supplément 11 (Paris 2004), Nos. 851-1191. However, the ϵ in the Phoenician issues is replaced on our coin by a linear device that has no parallels in the Sidonian coinage. This device is known from other forms of minor glyptic art, cf. e.g. J. BOARDMAN, *Seals and Signs. Anatolian Stamp Seals of the Persian Period Revisited*, Iran 36, 1998, Figs. 1, D8; 10. The attribution of a similar Sidonian-styled coin-type to Samaria (MESHORER/QEDAR No. 199) was refuted by ELAYI/ELAYI (*ibid.*, No. 1212), who considered this coin type an authentic Sidonian issue. However, this is the only issue in their IV.1.3 series with a retrograde *beth*.

²⁸ The obverse motif appears on several Samarian issues, see MESHORER/QEDAR, Nos. 71-72, 75-76, 185, 188, 190-191 and pp. 39-40. It is also comparable to the Cilician issues of Mallos, cf. SNG Switzerland I, Pl. 9, 150-153.

²⁹ The obol of this coin-type was published by Meshorer as a coin of Ashkelon, see Y. MESHORER, *The Mints of Ashdod and Ascalon during the Late Persian Period*, *Eretz-Israel*, 20, 1989, pp. 287-291 (Hebrew; English summary, p. 205*), at p. 290, No. 16. Recent discoveries allegedly in the region of Samaria of this coin-type together with other Samarian coins suggest that the attribution to Samaria is more likely.

³⁰ For the coin-type see MESHORER/QEDAR, No. 139 (struck from the same pair of dies), and above coin 12 for a similar reverse. This specimen shows that Heracles is bearded and rests his r. arm on a shield; see also Y. MESHORER/S. QEDAR, *The Coinage of Samaria in The Fourth Century BCE* (Jerusalem 1991), p. 56, No. 66, Pl. 10.

Obols

- 18 *Obv.* Galley to l. over double wavy line pattern; in field above *Šmryn*. Border of dots.
Rev. The Persian Great King to r., wearing kidaris and kandys, fighting an upright lion by seizing its forelocks with his raised l. hand; between the two figures *mz* (𐤌𐤆). Incuse square.
 AR, 0.64 g, 7 mm, 9.00; Israel Museum, No. 16170³¹ (*Pl. 8, 18*).
- 19 *Obv.* Two soldiers standing confronted, each carrying shields and spear. Square border of dots.³²
Rev. Two figures standing confronted, each holding a spear. The figure to r. carries a shield and appears in incuse, however the body's outline and garment is represented in linear relief. Incuse square.³³
 AR, 0.71 g, 7 mm, 2.00; Israel Museum, No. 16167³⁴ (*Pl. 8, 19*).

The repertoire of Samaritan coinage has increasingly grown in the last 24 years. In 1982 Meshorer included four Samaritan coins in Supplement I of his monograph *Ancient Jewish Coinage*, vol. I. Less than a decade later, in 1991, Meshorer and Qedar were able to gather 106 types,³⁵ and in 1999,³⁶ they published a corpus of 224 Samaritan coins.³⁷ Since 1999 new Samaritan coin-types have appeared on the antiquities market. In addition to the coins acquired by the Israel Museum, we are aware of about forty other new coin-types in private collections. Yet, to date, those retrieved from controlled archaeological excavations are restricted to two sites. One is Mount Gerizim, where excavations carried out by the Staff Officer of Archaeology of the Civil Administration of Judea and Samaria yielded twenty

³¹ For the coin-type see MESHORER/QEDAR, No. 96, struck from the same pair of dies, and pp. 25-26 for the name. The upright lion's position is similar to that appearing on some stamped impressions on local pottery vessels found at Gibeon and Ramat Rahel (both near Jerusalem), see E. STERN, *Material Culture of the Land of the Bible in the Persian Period 538-332 BC* (Warminster/Jerusalem 1982), p. 211, Figs. 349-350.

³² For the coin-type see MESHORER/QEDAR, No. 50.

³³ A similar scene appears on the reverse of a coin of Taros in Cilicia, see SNG France 2, Cilicia (Paris 1993), Pl. 7, No. 208.

³⁴ The combination of the incused techniques and the representation of the outline of the design in linear relief is characteristic of the early Phoenician coinage, cf. e.g. BMC Phoenicia, Pls. 17, 12-13; 18, 1-2, 4, 10-11; 42, 11 [Sidon]; 40, 9, 12-13 [Byblos]. On this Phoenician phenomenon in general, see P. NASTER, *La technique des revers partiellement incus de monnaies phéniciennes*, in: H. INGHOLT (ed.), *ANS Centennial Publication* (New York 1958), pp. 503-511.

³⁵ MESHORER/QEDAR 1991 (above, n. 30).

³⁶ MESHORER/QEDAR (above, n. 4).

³⁷ We avoid using here the term coin-type since in several cases MESHORER/QEDAR gave different numbers to coins of the same type but not of the same denomination.

coins,³⁸ and now the recent find of the obol with the name Šhrw at Gan Soreq (*coin 2c*). According to antiquity dealers who inquired about the alleged provenance, it seems that the circulation of Samarian coins was limited mostly to the mountainous region of the land of Samaria. The main find spot of these coins is Samaria/Sebaste. They have also been found in the area between Ramallah and Latrun, as well as in the Sharon Plain up to Naḥal ʿIron. From this partial information we may assume that they served as a local, indigenous currency, belonging to a monetary system that operated in the land of Samaria in the later part of the Persian period.

III. X-Ray Fluorescence Analysis of Samarian Coins

X-Ray Fluorescence (XRF) analysis involves aiming a beam of X-rays at a small area on an artifact or sample and measuring the wavelength and intensity of the secondary X-rays that are «fluoresced» (given-off) by the area hit by the primary X-rays. The wavelengths correspond to the elements present, and their intensity is directly related to their concentration. The technique relies on precise geometry between the sample surface and the detector, which is difficult to obtain when the sample is not prepared and specially mounted, but this is accounted for in modern XRF systems. The X-rays only penetrate about 20 microns and as such this procedure is considered a surface analytical technique – the question is then whether the volume (area × depth) analyzed is representative of the whole object. With coins this is not always the case, since the surface is sometimes changed in composition by segregation during solidification or heat treatment, by corrosion processes, or by human agency (e.g. chemical cleaning).

«Hand-held» portable XRFs, like the one used for analyzing coins here, have improved in the last few years. The quality of the machines and their accuracy has increased and has become quite reliable. However, it has been shown that there is full agreement between surface and bulk methods for Ag content only in cases where the Ag results are greater than 92% (the solubility limit for Cu in Ag).³⁹ Oxford Instruments kindly allowed us to use their X-MET3000-TX handheld XRF, which reads to 0.01 weight percent in bulk analysis; the accuracy and precision are element specific, but in many cases with precision as good as 0.01-0.1% for all elements analyzed. The manufacturer gives the Fe detection limit for Fe in a Cu matrix as roughly 100ppm = 0.01% (3 sigma, 100s measuring time). The sampling area is an adjustable window, 3 × 5 mm.

³⁸ Eighteen of these coins are noted in Y. MAGEN, *Mt. Gerizim – A Temple City*, Qadmoniot 120, 2000, p. 114 (in Hebrew). Two additional issues were found after the publication of Magen's article (personal communication G. Bijovsky).

³⁹ For a reassessment of XRF analysis and the main advantages of the technique, see GITLER/TAL (above, n. 11), p. 329. A. Shugar carried out the XRF analysis discussed below at the Israel Museum.

Given these considerations, the following table of XRF analysis (*Table 1*) has been included as a preliminary data-base in the interests of scholarly transparency. It shows that 43 of a total of 66 analyzed Samarian coins, that is 65.15%, have a silver value of over 92%, and the average value of silver in all of these coins is 91.82%.⁴⁰

TABLE 1: XRF Analysis of Samarian Coins

| Coin-type* | Remarks* | Ag | Au | Bi | Cr | Cu | Fe | Hf | Pb | Sn | Ti | W | Zn | Bullion |
|---|----------|------|------|------|------|-------|------|------|------|------|------|------|------|---------|
| No. 2a, 0.65 gr.; axis 5 | GCC | 90.9 | 0.36 | 0.00 | 0.30 | 7.66 | 0.26 | 0.18 | 0.17 | 0.00 | 0.00 | 0.00 | 0.13 | 91.5 |
| No. 3, 0.51 gr.; axis 3 | IM 24584 | 98.5 | 0.33 | 0.00 | 0.00 | 0.66 | 0.32 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 0.00 | 99.0 |
| No. 4, 0.76 gr.; axis 3 | IM 24585 | 96.9 | 0.54 | 0.03 | 0.00 | 1.61 | 0.63 | 0.00 | 0.31 | 0.00 | 0.00 | 0.00 | 0.00 | 97.8 |
| No. 5, 0.14 gr.; axis 3 | IM 15619 | 82.1 | 0.13 | 0.00 | 0.31 | 16.43 | 0.40 | 0.00 | 0.61 | 0.00 | 0.00 | 0.00 | 0.03 | 82.8 |
| No. 6, 0.18 gr.; axis 9 | IM 15620 | 94.3 | 0.27 | 0.00 | 0.36 | 3.81 | 0.36 | 0.00 | 0.85 | 0.00 | 0.00 | 0.00 | 0.00 | 95.5 |
| No. 7, 0.09 gr.; axis 12 | IM 15621 | 80.6 | 0.08 | 0.00 | 0.22 | 18.00 | 0.41 | 0.00 | 0.69 | 0.00 | 0.00 | 0.00 | 0.00 | 81.4 |
| No. 9, 0.10 gr.; axis 2 | IM 16165 | 91.0 | 0.08 | 0.00 | 0.00 | 8.03 | 0.35 | 0.00 | 0.54 | 0.00 | 0.00 | 0.00 | 0.00 | 91.6 |
| No. 12, 0.23 gr.; axis 12 | IM 24867 | 69.6 | 0.00 | 0.00 | 0.22 | 28.27 | 0.36 | 0.00 | 0.68 | 0.46 | 0.00 | 0.27 | 0.06 | 70.3 |
| No. 14, 0.64 gr.; axis 6 | IM 16191 | 97.1 | 0.23 | 0.00 | 0.31 | 0.91 | 0.29 | 0.00 | 0.59 | 0.55 | 0.00 | 0.00 | 0.00 | 97.9 |
| No. 17, 0.28 gr.; axis 2 | IM 24586 | 84.2 | 0.16 | 0.00 | 0.20 | 13.91 | 0.33 | 0.20 | 0.34 | 0.42 | 0.00 | 0.18 | 0.04 | 84.7 |
| No. 18, 0.64 gr.; axis 9 | IM 16170 | 92.8 | 0.20 | 0.00 | 0.00 | 5.59 | 0.24 | 0.41 | 0.61 | 0.00 | 0.00 | 0.00 | 0.12 | 93.6 |
| No. 19, 0.71 gr.; axis 2 | IM 16167 | 97.7 | 0.21 | 0.00 | 0.00 | 1.37 | 0.35 | 0.00 | 0.32 | 0.00 | 0.00 | 0.00 | 0.00 | 98.3 |
| M-Q: 146, 2.41 gr.; axis 12 | IM 24533 | 91.4 | 0.56 | 0.00 | 0.00 | 6.08 | 0.41 | 0.00 | 0.24 | 0.48 | 0.64 | 0.17 | 0.00 | 92.2 |
| M-Q: 113, 3.92 gr.; axis 10 | IM 16175 | 96.1 | 0.31 | 0.00 | 0.29 | 0.76 | 0.85 | 0.00 | 0.98 | 0.00 | 0.69 | 0.00 | 0.00 | 97.4 |
| M-Q: 121, 0.21 gr. axis 8 | IM 15623 | 78.7 | 0.59 | 0.03 | 0.00 | 19.41 | 0.34 | 0.00 | 0.44 | 0.45 | 0.00 | 0.00 | 0.09 | 79.7 |
| M-Q: 50, 0.59 gr.; axis 5 | IM 14903 | 97.1 | 0.10 | 0.00 | 0.00 | 1.41 | 0.65 | 0.00 | 0.18 | 0.00 | 0.61 | 0.00 | 0.00 | 97.3 |
| M-Q: 144, 0.73 gr.; axis 2 | IM 15360 | 78.5 | 0.30 | 0.00 | 0.18 | 18.87 | 0.64 | 0.46 | 0.45 | 0.47 | 0.00 | 0.00 | 0.12 | 79.3 |
| M-Q: 109, 0.72 gr.; axis 5 | IM 15361 | 97.7 | 0.30 | 0.03 | 0.00 | 0.49 | 0.36 | 0.00 | 0.06 | 0.00 | 1.02 | 0.00 | 0.00 | 98.1 |
| M-Q: 134, 0.57 gr.; axis 8 | IM 15362 | 96.5 | 0.28 | 0.00 | 0.29 | 1.86 | 0.29 | 0.00 | 0.80 | 0.00 | 0.00 | 0.00 | 0.00 | 97.6 |
| M-Q: 5, 0.41 gr.; axis 3 | IM 15363 | 78.1 | 0.00 | 0.00 | 0.17 | 20.47 | 0.35 | 0.53 | 0.10 | 0.00 | 0.00 | 0.23 | 0.10 | 78.2 |
| M-Q: 87, 0.64 gr.; axis 9 | IM 15296 | 91.2 | 0.90 | 0.29 | 0.00 | 0.21 | 6.94 | 0.00 | 0.49 | 0.00 | 0.00 | 0.00 | 0.00 | 92.9 |
| M-Q: 38, 0.87 gr.; axis 5 | IM 15295 | 91.3 | 0.27 | 0.00 | 0.30 | 5.83 | 0.37 | 0.00 | 0.47 | 0.78 | 0.70 | 0.00 | 0.00 | 92.0 |
| M-Q: 161, 0.82 gr.; axis 12 | IM 15294 | 80.1 | 0.42 | 0.03 | 0.00 | 16.42 | 1.25 | 0.23 | 0.46 | 0.96 | 0.00 | 0.00 | 0.11 | 81.0 |
| M-Q: 1, 0.59 gr.; axis 10 | IM 15286 | 97.5 | 0.52 | 0.00 | 0.33 | 0.24 | 0.32 | 0.00 | 0.12 | 0.00 | 0.95 | 0.00 | 0.00 | 98.2 |
| Cf. M-Q: 214, 0.51 gr.; axis 5 | IM 15756 | 95.1 | 0.08 | 0.00 | 0.00 | 3.76 | 0.31 | 0.00 | 0.75 | 0.00 | 0.00 | 0.00 | 0.00 | 95.9 |
| M-Q: 215, 0.64 gr.; axis 8 | IM 15757 | 94.7 | 0.09 | 0.00 | 0.27 | 3.51 | 0.33 | 0.00 | 0.62 | 0.50 | 0.00 | 0.00 | 0.00 | 95.4 |
| M-Q: 213, 0.56 gr.; axis 8 | IM 15758 | 96.3 | 0.07 | 0.03 | 0.35 | 2.40 | 0.30 | 0.00 | 0.57 | 0.00 | 0.00 | 0.00 | 0.00 | 97.0 |
| M-Q: 18 (this coin), 0.23 gr.; axis 9 | IM 15617 | 86.6 | 0.05 | 0.00 | 0.00 | 12.52 | 0.33 | 0.00 | 0.36 | 0.00 | 0.00 | 0.08 | 0.06 | 87.0 |
| M-Q: 73 (this coin), 0.80 gr.; axis 10 | IM 15628 | 98.0 | 0.36 | 0.04 | 0.00 | 0.17 | 0.57 | 0.00 | 0.13 | 0.00 | 0.78 | 0.00 | 0.00 | 98.5 |
| M-Q: 139, 0.28 gr.; axis 5 | IM 15608 | 80.6 | 0.17 | 0.00 | 0.29 | 17.41 | 0.34 | 0.00 | 1.00 | 0.00 | 0.00 | 0.12 | 0.07 | 81.8 |
| M-Q: 57 (this coin), 3.38 gr.; axis 12 | IM 1257A | 93.9 | 0.33 | 0.00 | 0.00 | 1.78 | 2.13 | 0.00 | 0.63 | 1.19 | 0.00 | 0.00 | 0.00 | 94.9 |
| M-Q: 212, 4.06 gr.; axis 12 | IM 2376 | 94.7 | 0.07 | 0.00 | 0.00 | 1.11 | 0.32 | 0.00 | 0.31 | 0.64 | 0.95 | 0.09 | 1.87 | 95.0 |
| M-Q: 141, 0.60 gr.; axis 3 | GCC | 91.4 | 0.19 | 0.00 | 0.21 | 5.74 | 0.29 | 0.00 | 0.83 | 0.47 | 0.81 | 0.00 | 0.04 | 92.4 |
| M-Q: 44, 0.77 gr.; axis 9 | GCC | 79.7 | 0.27 | 0.00 | 0.00 | 18.09 | 0.57 | 0.41 | 0.31 | 0.00 | 0.50 | 0.00 | 0.18 | 80.2 |
| M-Q: 44, 0.74 gr.; axis 2 | GCC | 97.0 | 0.27 | 0.00 | 0.36 | 1.02 | 0.33 | 0.00 | 0.33 | 0.00 | 0.74 | 0.00 | 0.00 | 97.6 |

⁴⁰ The closest refined product that could have been achieved by traditional smelting and refining processes would also include traces of gold, lead and bismuth; this would be the true silver bullion value (P.T. CRADDOCK, *Early Metal Mining and Production* [Edinburgh 1995]). Accordingly the true fineness of silver coins should be defined not only as the silver value but as a combination of silver, gold, lead and bismuth.

COINS WITH THE LEGEND *ŠHRW* AND OTHER UNRECORDED SAMARIAN ISSUES

| | | | | | | | | | | | | | | |
|-----------------------------|-----|------|------|------|------|-------|------|------|------|------|------|------|------|---------|
| M-Q: 166, 0.66 gr.; axis 12 | GCC | 96.2 | 0.22 | 0.00 | 0.00 | 2.10 | 0.31 | 0.00 | 0.34 | 0.00 | 0.85 | 0.00 | 0.00 | 96.7 |
| M-Q: 37, 0.48 gr.; axis 4 | GCC | 95.8 | 0.00 | 0.00 | 0.00 | 1.69 | 0.31 | 0.00 | 0.46 | 0.96 | 0.75 | 0.00 | 0.00 | 96.3 |
| M-Q: 80, 0.47 gr.; axis 9 | GCC | 97.3 | 0.29 | 0.00 | 0.37 | 0.81 | 0.32 | 0.00 | 0.03 | 0.00 | 0.87 | 0.00 | 0.00 | 97.6 |
| M-Q: 197, 0.26 gr.; axis 10 | GCC | 94.6 | 0.23 | 0.00 | 0.25 | 3.54 | 0.31 | 0.00 | 0.46 | 0.57 | 0.00 | 0.00 | 0.02 | 95.3 |
| M-Q: 1, 0.56 gr.; axis 6 | GCC | 87.7 | 0.11 | 0.00 | 0.19 | 10.66 | 0.34 | 0.30 | 0.48 | 0.00 | 0.00 | 0.08 | 0.08 | 88.3 |
| M-Q: 20, 0.72 gr.; axis 6 | GCC | 95.5 | 0.27 | 0.00 | 0.00 | 2.85 | 0.34 | 0.00 | 0.52 | 0.48 | 0.00 | 0.00 | 0.00 | 96.3 |
| M-Q: 114, 0.63 gr.; axis 12 | GCC | 96.6 | 0.27 | 0.00 | 0.46 | 1.07 | 0.31 | 0.00 | 0.31 | 0.00 | 0.95 | 0.00 | 0.00 | 97.2 |
| M-Q: 45, 0.57 gr.; axis 9 | GCC | 96.7 | 0.23 | 0.00 | 0.00 | 1.29 | 0.32 | 0.00 | 0.12 | 1.35 | 0.00 | 0.00 | 0.00 | 97.0 |
| M-Q: 93, 0.49 gr.; axis 6 | GCC | 97.1 | 0.28 | 0.00 | 0.25 | 0.68 | 0.32 | 0.00 | 0.70 | 0.63 | 0.00 | 0.00 | 0.00 | 98.1 |
| M-Q: 148, 0.76 gr.; axis 2 | GCC | 93.6 | 0.18 | 0.00 | 0.24 | 4.29 | 0.29 | 0.00 | 0.64 | 0.74 | 0.00 | 0.00 | 0.00 | 94.4 |
| M-Q: 98, 0.49 gr.; axis 12 | GCC | 98.1 | 0.32 | 0.00 | 0.32 | 0.44 | 0.48 | 0.00 | 0.30 | 0.60 | 0.00 | 0.00 | 0.00 | 98.8 |
| M-Q: 4, 0.58 gr.; axis 6 | GCC | 91.5 | 0.19 | 0.00 | 0.25 | 6.65 | 0.35 | 0.25 | 0.73 | 0.00 | 0.00 | 0.00 | 0.06 | 92.4 |
| M-Q: 139, 0.27 gr.; axis 6 | GCC | 80.9 | 0.13 | 0.00 | 0.20 | 16.88 | 0.35 | 0.37 | 0.64 | 0.46 | 0.00 | 0.00 | 0.14 | 81.6 |
| M-Q: 176, 0.32 gr.; axis 12 | GCC | 73.2 | 0.06 | 0.00 | 0.00 | 24.79 | 0.50 | 0.30 | 0.42 | 0.40 | 0.00 | 0.14 | 0.15 | 73.7 |
| M-Q: 215, 0.19 gr.; axis 4 | GCC | 93.0 | 0.11 | 0.00 | 0.33 | 4.66 | 0.32 | 0.11 | 0.92 | 0.55 | 0.00 | 0.00 | 0.04 | 94.0 |
| M-Q: 176, 0.23 gr.; axis 2 | GCC | 91.0 | 0.14 | 0.00 | 0.32 | 7.85 | 0.33 | 0.00 | 0.36 | 0.00 | 0.00 | 0.00 | 0.04 | 91.5 |
| M-Q: 37, 0.54 gr.; axis 3 | GCC | 90.7 | 0.00 | 0.00 | 0.32 | 7.31 | 0.31 | 0.34 | 0.15 | 0.00 | 0.78 | 0.00 | 0.09 | 90.8 |
| M-Q: 207, 0.34 gr.; axis 3 | GCC | 96.1 | 0.04 | 0.00 | 0.33 | 2.12 | 0.31 | 0.00 | 0.14 | 0.00 | 0.63 | 0.00 | 0.00 | 96.6 |
| M-Q: 118, 0.71 gr.; axis 12 | GCC | 96.0 | 0.14 | 0.00 | 0.43 | 2.55 | 0.34 | 0.00 | 0.53 | 0.00 | 0.00 | 0.00 | 0.00 | 96.7 |
| M-Q: 112, 0.30 gr.; axis 5 | GCC | 94.7 | 0.14 | 0.00 | 0.22 | 4.11 | 0.26 | 0.00 | 0.51 | 0.00 | 0.00 | 0.00 | 0.00 | 95.4 |
| M-Q: 148, 0.80 gr.; axis 6 | GCC | 97.2 | 0.19 | 0.00 | 0.36 | 0.90 | 0.30 | 0.00 | 0.32 | 0.00 | 0.76 | 0.00 | 0.00 | 97.7 |
| M-Q: 44, 0.76 gr.; axis 9 | GCC | 94.0 | 0.25 | 0.04 | 0.33 | 3.45 | 0.34 | 0.00 | 0.80 | 0.84 | 0.00 | 0.00 | 0.00 | 95.1 |
| M-Q: 14, 0.51 gr.; axis 9 | GCC | 93.7 | 0.21 | 0.00 | 0.26 | 4.67 | 0.31 | 0.00 | 0.29 | 0.00 | 0.57 | 0.00 | 0.03 | 94.2 |
| M-Q: 122, 0.20 gr.; axis 2 | GCC | 92.7 | 0.09 | 0.00 | 0.26 | 6.07 | 0.37 | 0.00 | 0.55 | 0.00 | 0.00 | 0.00 | 0.00 | 93.3 |
| M-Q: 120, 0.72 gr.; axis 11 | GCC | 97.2 | 0.33 | 0.00 | 0.00 | 1.33 | 0.35 | 0.00 | 0.31 | 0.44 | 0.00 | 0.00 | 0.00 | 97.9 |
| M-Q: 134, 0.60 gr.; axis 12 | GCC | 96.2 | 0.23 | 0.00 | 0.23 | 1.72 | 0.28 | 0.00 | 0.86 | 0.52 | 0.00 | 0.00 | 0.00 | 97.2 |
| M-Q: 210, 0.40 gr.; axis 7 | GCC | 94.0 | 0.20 | 0.00 | 0.33 | 3.07 | 0.34 | 0.00 | 0.75 | 0.57 | 0.74 | 0.00 | 0.00 | 94.9 |
| M-Q: 76, 0.28 gr.; axis 5 | GCC | 96.8 | 0.27 | 0.00 | 0.34 | 1.37 | 0.36 | 0.00 | 0.12 | 0.00 | 0.77 | 0.00 | 0.00 | 97.2 |
| M-Q: 80, 0.30 gr.; axis 9 | GCC | 93.0 | 0.20 | 0.00 | 0.30 | 4.64 | 0.29 | 0.00 | 1.16 | 0.43 | 0.00 | 0.00 | 0.00 | 94.3 |
| M-Q: 102, 0.67 gr.; axis 5 | GCC | 95.9 | 0.24 | 0.00 | 0.28 | 2.67 | 0.30 | 0.00 | 0.60 | 0.00 | 0.00 | 0.00 | 0.00 | 96.8 |
| M-Q: 102, 0.66 gr.; axis 5 | GCC | 95.1 | 0.35 | 0.00 | 0.24 | 3.28 | 0.27 | 0.00 | 0.16 | 0.56 | 0.00 | 0.00 | 0.00 | 95.6 |
| Average | | 91.8 | | | | | | | | | | | | Average |
| Total: 66 Samarian Coins | | 91.8 | | | | | | | | | | | | 92.5 |

* M-Q = Meshorer/Qedar 1999

• GCC = Gil Chaya Collection; IM = Israel Museum, Jerusalem

These results can be compared to other XRF analyses of Palestinian coins of the Persian period. In the case of Philistia, we learn that out of 271 analyzed coins, 223 (82.28%) were found to have a silver content higher than 92% and that the average value of silver in all analyzed Philistian coins is 94.28%.⁴¹ In the case of Late Persian-period Yehud coins, we learn that all 27 analyzed coins have a silver content higher than 92% and the average value of silver is 97.05%. These high values clearly indicate that these coins were produced from the purest silver bullion available at the time.⁴² By contrast, in analyzed Samarian coins there is a highly variable but significant copper content averaging 6.1% which strongly suggests that the

⁴¹ See GITLER/TAL (above, n. 11), pp. 329-334.

⁴² See H. GITLER/C. LORBER, A New Chronology for the Ptolemaic Coins of Judah, AJN 18 pp. 1-41.

silver bullion was intentionally alloyed with copper.⁴³ In the Philistian coinage a debasement of about 3.4% was noted, suggesting that in this case, too, the silver bullion was intentionally alloyed with copper.⁴⁴

Zusammenfassung

In diesem Artikel, der aus drei Teilen besteht, werden neue Erkenntnisse zur Münzprägung von Samaria im vierten Jahrhundert v.Chr. vorgestellt. Der erste Teil behandelt Typen mit dem Namen *Šhrw* sowie die archäologischen, historischen und metallurgischen Gründe für deren Zuweisung an Samaria, während der zweite Teil aus einem Katalog von 14 bisher nicht erfassten samarischen Prägungen besteht.

Der dritte Teil bringt eine Metallanalyse (Röntgenfluoreszenz) des Silbergehaltes von 66 samarischen Münzen im Vergleich mit andern Prägungen aus Palästina (philistisch oder Yehud-Münzen), die kürzlich mit der gleichen Methode analysiert wurden

Haim Gitler
Curator of Numismatics
The Israel Museum
P.O. Box 71117
IL-Jerusalem 91710
gitler@imj.org.il

Dr. Oren Tal
Dept. of Archaeology and
Ancient Near Eastern Cultures
Tel Aviv University
IL Ramat Aviv, Tel Aviv 69978
orental@post.tau.ac.il

⁴³ This variability is almost certainly due to the use of a surface only analytical technique. For a discussion of this issue see K. BUTCHER/M. PONTING, *Rome and the East. Production of Roman Provincial Silver Coinage for Caesarea in Cappadocia under Vespasian*, AD 69-79, *Oxford Journ. of Arch.* 14/1, 1995, pp. 63-78.

⁴⁴ The copper values of Philistian coins are not sufficiently rigorous and fall mainly between 0.11-4.97%. We excluded from the copper average of this group four coins which are extremely outliers. Two are copper cores of plated coins with copper values of 97.2% and 96.96%, the two others have values of 55.67% and 31.97%.



1 a



1 b



2 a



2 b





3



4



5



6



7



8



9



10





11 a



11 b



11 c



12



13





14



15



16



17



18



19



