

Arad Ostracon 24 Side A

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Abstract. This article deals with Ostracon 24 from Arad, Side A. It has three parts, written by different authors: An introduction to the multispectral imaging of the ostracon, which made this study possible, followed by two alternative decipherments of the inscription.

Résumé. Cet article porte sur l'ostracon d'Arad n° 24, face A. Il comporte trois parties, écrites par différents auteurs : une introduction à l'imagerie multispectrale de l'ostracon, qui a rendu cette étude possible, suivie par deux déchiffrements alternatifs de l'inscription.

Keywords: Arad ostraca, Arad 24, Multispectral imaging, Palimpsest, Elyashib, Arad storehouse, Paleography

Part I: Introduction: Multispectral Imaging of Ostracon 24A from Arad

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In recent years the team of the Digital Epigraphy project at Tel Aviv University¹ carried out multispectral imaging of Hebrew ostraca

¹For the project and its publications see <http://www-nuclear.tau.ac.il/~eip/ostraca/Home/>. The project received initial funding from the European Research Council under the European Community's Seventh Framework Programme (FP7/2007-2013)/ERC Grant Agreement 229418, the Israel Science Foundation – F.I.R.S.T. (Bikura) Individual Grant 644/08, and the Israel Science Foundation Grants 1457/13 and 2062/18. The Digital Epigraphy work at Tel Aviv University, including the current study, is supported by a generous donation from Mr. Jacques Chahine, made through the French Friends of Tel Aviv University. We thank Dr. Eran Arie, Curator of Iron Age and Persian Period Archaeology at the Israel Museum, Jerusalem for his help. Ostracon images are courtesy of the Institute of Archaeology, Tel Aviv University (photographer: Michael Cordonsky) and of the Israel Antiquities Authority.

from Judah, including the Arad inscriptions.² The most dramatic discovery was a “new” three-line ostrakon on the verso of Arad 16, a side that was previously believed to be blank.³

One of the most important ostraca in the Arad corpus is No. 24, which deals with an historical event in the Negeb ca. 600 BCE.⁴ The sherd is inscribed on both sides, one very well-preserved and the other so badly eroded that it is almost fully faded (Fig. 1). Aharoni read אל אלישיב (To Elyashib) in the opening of the eroded side and hence saw it as the beginning of a two-sided inscription which belong to the group of Elyashib letters; we therefore label it below 24A. The text of the well-preserved side is a message ordering the movement of troops from the Judahite Negeb towns of Arad and Kinah to the town of Ramat-negeb because of a looming Edomite attack; this side is labeled below 24B. In this introduction and in the two articles that follow we deal with Arad 24A.

² S. Faigenbaum, B. Sober, A. Shaus, M. Moinester, E. Piasetzky, G. Bearman, M. Cordonsky and I. Finkelstein, “Multispectral Images of Ostraca: Acquisition and Analysis”, *Journal of Archaeological Science* 12, 2012, p. 3581-3590; B. Sober, S. Faigenbaum, I. Beit-Arieh, I. Finkelstein, M. Moinester, E. Piasetzky and A. Shaus, “Multispectral Imaging as a Tool for Enhancing the Reading of Ostraca”, *PEQ* 146, 2014, p. 185-197.

³ S. Faigenbaum-Golovin, A. Mendel-Geberovich, A. Shaus, B. Sober, M. Cordonsky, D. Levin, M. Moinester, B. Sass, E. Turkel E. Piasetzky and I. Finkelstein, “Multispectral Imaging Reveals Biblical-Period Inscription Unnoticed for Half a Century”, *Plos One* June 14th, 2017; A. Mendel-Geberovich, A. Shaus, S. Faigenbaum-Golovin, B. Sober, M. Cordonsky, E. Piasetzky and I. Finkelstein, “A Brand New Old Inscription: Arad Ostrakon 16 Rediscovered via Multispectral Imaging”, *BASOR* 378, 2017, p. 113-125.

⁴ Y. Aharoni, *Arad Inscriptions*, Jerusalem, Israel Exploration Society, 1981, p. 46-49.



Fig. 1: The two sides of Ostracon 24 from Arad: top - 24B; bottom - 24A.

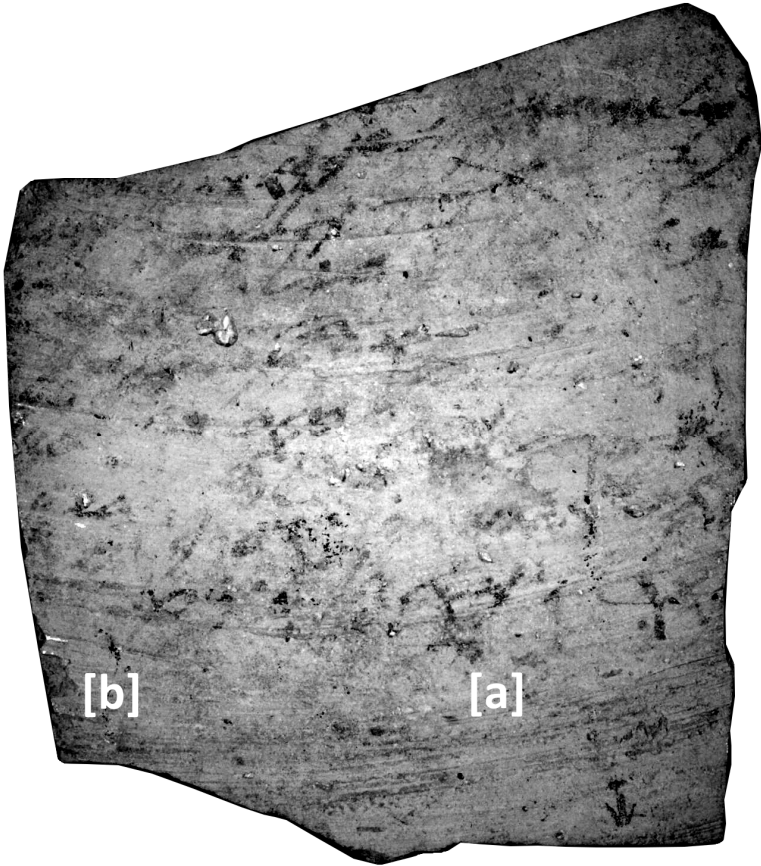


Fig. 2: Multispectral image of Arad 24A taken at 830 nm. Two different inscriptions are marked: [a] on the right and [b] on the left.

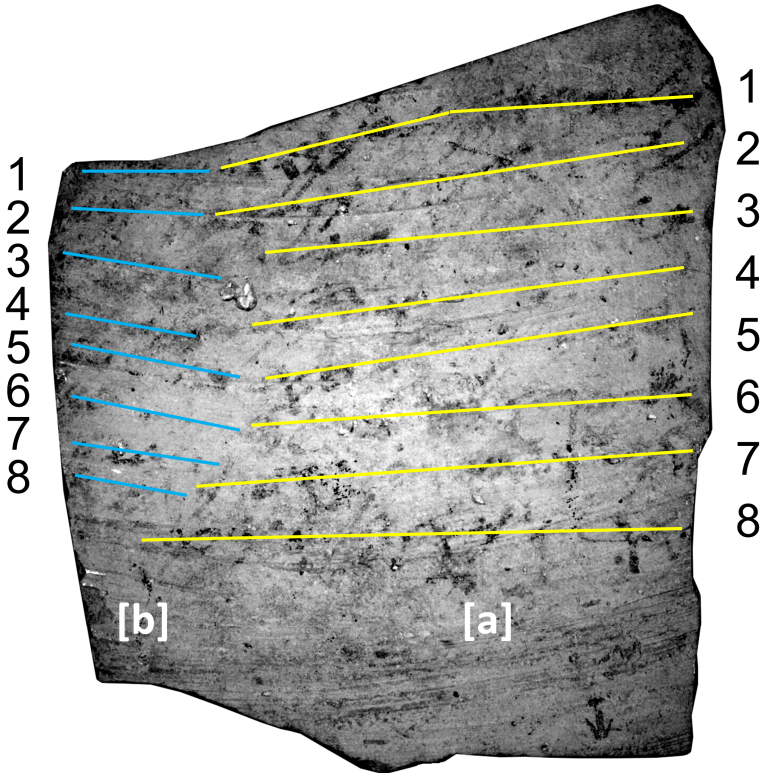


Fig 3: Direction of the lines on the left [b] and right [a] sides of Arad 24A.

Aharoni managed to decipher 28 letters in Arad 24A. Apart from his reading of **אל אלישיב** at the beginning of the inscription, he rendered four more words on this side of the ostrakon, each on a different line.⁵

During the course of our project we took multispectral images of Arad 24A (Fig. 2). These images add about 60 characters not seen before. In addition, they seem to show two different inscriptions on this side: lines with large, somewhat clumsy letters on the right (Fig. 2 [a]) and attractively-written lines with smaller letters and a somewhat different orientation on the left (Figs. 2 [b], 3).

In order to improve our understanding regarding the number of writers on Arad 24A, and explore the relation of Arad 24A to Arad

⁵ Aharoni, 1981, op. cit. (above, n. 4); and see below.

24B, we developed a method that enabled us to distinguish between inks according to their spectral signature. This method is based on the idea that at specific wavelengths materials reflect electromagnetic energy differently. Our results – which include investigation of other Arad ostraca – will be published elsewhere.⁶ Suffice it to say here that the ink of both [a] and [b] in Ostracon 24A (Fig. 2) is different from the ink in 24B, and that [a] and [b] in 24A are different from each other. This means that we are probably dealing here with a unique situation of three different inscriptions on one ostracon: an old inscription [b] in 24A, which was partly erased to make room for a new inscription [a], and 24B. Needless to say, this influences the understanding of the ostracon.

Although the multispectral imaging dramatically improved the legibility of the inscription, it does not allow for easy decipherment. Indeed, our team could not reach a consensus regarding the reading of the ostracon. We therefore decided to publish two alternatives. We provide good images of the lines in order to make it possible for scholars to suggest a better reading than the two presented here.

Part II: A New Appraisal of Ostracon 24A

Nadav Na'aman

In his edition of the Arad inscriptions, Aharoni treated the two sides of Ostracon 24 as two parts of a single letter whose obverse was badly eroded and its reverse preserved almost intact.⁷ Rendering the beginning of the obverse **אל אלישב** (“To Elyashib”), he assumed that Elyashib was the addressee. Because of the eroded state of the obverse Aharoni was able to decipher only a few isolated words, namely, **מלך** (“king”), **חיל** (“troop”), **כסף** (“silver”) and **עבר**

⁶ S. Faigenbaum-Golovin, I. Finkelstein and E. Piasetzky “Ink Separation in Multispectral Images of Iron Age Ostraca from Judah”, *forthcoming*.

⁷ Aharoni, 1981, *op. cit.* (above, n. 4); according to him the ostracon was found outside the fortress, on the western slope of the mound.

(which he erroneously translated “passed”). Other scholars accepted Aharoni’s rendering of the name Elyashib at the beginning of the observe and suggested additional restorations to the text.⁸

The new multispectral images of the two sides of Ostrakon 24 indicate that an entirely different interpretation should be suggested. They show that Side A is a palimpsest in which the original text was deliberately erased and a new text was written on most of the cleared surface (Fig. 2); also, that the script on most of the surface is different from that of Side B (Fig. 1). The new analysis of the ink according to its spectral signature supports this conclusion. It showed that the text on Side A was written in a different ink than Side B and that the script on Side A was written in two inks, and hence by two different scribes.⁹

According to the spectral signature analysis, the ink of the line-ends on Side A (Fig. 2 [b]) is different from the ink on Side B. This means that three different scribes wrote the texts on Sides A-B. The original ostrakon sent to the local commander of Arad was written on two sherds, one of which was lost and the second discovered (Ostrakon 24 Side B). Next, a local scribe at Arad wrote his text on the reverse (Side A [b]) of Ostrakon 24. Finally, a third scribe erased the text on the reverse and wrote his own text on most of its surface (Side A [a]).

There are reasons to doubt this three-stage interpretation. First, there is no parallel in the epigraphic corpus of ostraca discovered thus far in the Levant of a text written on two different sherds. All the ostraca discovered to date were written either on one or two sides of a single sherd.¹⁰ Hence the natural assumption

⁸ A. Lemaire, *Inscriptions hébraïques*, vol. 1: *Les ostraca*, Paris, Cerf, 1977, p. 188; J. Renz, *Die althebräischen Inschriften*. Part I. *Text und Kommentar* (J. Renz and W. Röllig, eds, *Handbuch der althebräischen Epigraphik*, Vol. 1). Darmstadt, wbg Academic, 1995, p. 391; F.W. Dobbs-Allsopp, J.J.M. Roberts, C.L. Seow and R.E. Whitaker, *Hebrew Inscriptions. Texts from the Biblical Period of the Monarchy with Concordance*, New Haven, Yale University Press, 2005, p. 48-49; S. Aḥituv, *Echoes from the Past: Hebrew and Cognate Inscriptions from the Biblical Period*, Jerusalem, Carta, 2008, p. 126, 128. Renz rendered in Line 3 [ר] לִסְפָּ (“Brief”) and in Line 8 [ה] כִּסְּ (“Sil[ber]”).

⁹ Faigenbaum-Golovin, Finkelstein and Piasezky, op. cit. (above, n. 6).

¹⁰ For writing on the two sides of a sherd, see Lachish Ostraca 3, 4 and 9; Arad Ostraca Nos. 3, 16, 17, 18, 39 and 71; Kadesh-barnea Ostrakon No. 3. For these ostraca, see the texts editions of Renz 1995, Dobbs-Allsopp 2005, and Aḥituv 2008;

that originally Side A included the obverse and Side B the reverse of the letter sent to Arad.¹¹ Second, only eleven complete or partly complete letters are available for research of Side A [b] (see below), and it is unclear whether this is enough for establishing a separate stage of writing. Although the three-stage reconstruction is theoretically possible, I wonder if this is indeed the case. I therefore adhere to the reconstruction according to which the erased text on Side A was the obverse of Arad 24B. In this light, I divide my analysis of Side A into two parts: 1) the remains of the obverse of the original letter sent to Arad; and 2) the later text written at Arad on the cleared surface of Side A.

The Remains of the Original Text on Side A

Since the local scribe at Arad wrote his text on about three quarters of the right side, he did not bother to entirely obliterate the line-ends on the left (Fig. 2 [b]). These line-ends and some scattered letters that escaped obliteration and are faintly visible on the photographs, are silent witnesses to the history of the text. Thus, for example, a few blurred fragmented early letters can be traced in the photograph along the upper line of the ostrakon, and three blurred letters (פ י כ) are visible below the middle of this line. Also the blurred letters ל ץ are visible above the middle of Line 8.

Eight line-ends are observed along the left side of the ostrakon (Figs. 2 [b], 3 [b]) and are separated by vacant space from the text on the ostrakon's right side (Figs. 2 [a], 3 [a]). The direction of the lines on the left side does not match that of the lines on the right side (Fig 3). Moreover, the script of the line-ends looks unified and differs from the irregular script of the text on the right side (for details see below). These observations indicate that the line-ends were written by a different scribe than the lines on the ostrakon's right side.

for all three see, *op. cit.* (above, n. 8). For Arad 16, see Mendel-Geberovich *et al.* 2017, *op. cit.* (above, n. 3).

¹¹ It seems that a long letter that exceeds the scope of the two sides of a large sherd would have been written on papyrus.

Only a few letters of the line-ends can be identified. The letters ע ב נ[?] are visible at the end of Line 2; the letters ן ע at the end of Line 5; the letters ם ע at the end of Line 6; the letters ע ב ל at the end of Line 7; and the letter ן at the end of Line 7. No letter can be traced below Line 8, and it seems that the early text ends here. The photograph shows that deep marks of the potter's wheel begin below Line 8, and this might be the reason why the scribe planned his text to stop in this place.

As suggested above, the fragmented early inscription on Side A was apparently the first part of the letter that continued on Side B of the ostrakon. Like the text on the reverse, the lines of the obverse ran from margin to margin, and hence their survival on the left edge of Side A. The later scribe erased most of the original text on Side A, but since he used only three quarters of the cleared surface, he left remnants of the original text on its left side. Moreover, the text he wrote was a draft produced for his own use, and hence systematic obliteration of all traces of the original inscription was not necessary.

In sum, the difference in the direction of the lines on the two sides of Arad 24A, the remarkable differences in the letter forms between the early and later texts and the scattered early letters that underlie the later text strongly support the assumption that a second scribe erased the early text and used the surface he cleared in order to write his own text.

The Text of the Later Scribe

Unlike the clear and consistent script of the early letter, the script of the later text lacks clarity and consistency. The lines are curved and the letter forms are extremely inconsistent, so that gigantic letters appear side by side with letters of ordinary dimension (Figs 1-2).

As the text is badly eroded, I cannot present a running text of the whole inscription. In what follows I suggest a tentative transcription of the visible parts and a detailed commentary. I then propose an overall interpretation for the contents and purpose of the later text.

1. א/כל ע שע דִּי א [x x x x] ב ב ר/ו ת [(x)]
2. כסף 20 [ש??] מלך ב ל ל ת?
3. ב [.....] חיל.
4. [.....] כסמם
5. דִּחון [.....] עבר
6. ויער [ם x x ח] טה
7. הנִּחֵ [x x x x] ודִּבֵּב
8. אר ובר [א] רבע

Line 1: At first glance, the first letter looks like an *aleph* and was so read by Aharoni. Yet, in the new photographs the letter looks more like *kaph*, which gives a better sense to the text (כל, “total”).

The next sign looks like a Greek epsilon and is probably the hieratic sign ε. A similar sign appears in Arad Ostraca 1:7; 25:3; 31:10.¹² The sign was dealt with in detail by Wimmer,¹³ who suggested that it marks a measure of *homer/kor* and its capacity is about 220 liters.

The letters שע are probably an abbreviated form of Hebrew שערם. Similar abbreviations are known from other ostraca from Arad. For example: ח for חטם (Arad 49:15-16);¹⁴ קמ for קמה (Arad 8:2; 30:1-2; 112:1-2);¹⁵ ש for שקל (Arad 65:1-2; 81:1).¹⁶ See also the inscribed letters כב/ש in Arad 102-103 and the discussions of their interpretation by Cross and Aharoni.¹⁷

¹² Aharoni, 1981, op. cit. (above, n. 4), p. 12, 50-51, 56-57.

¹³ S. Wimmer, *Palästinisches Hieratisch. Die Zahl- und Sonderzeichen in der althebräischen Schrift* (Ägypten und Altes Testament 75), Wiesbaden, Harrassowitz, 2008, p. 27, 39-40, 254-255.

¹⁴ Aharoni, 1981, op. cit. (above, n. 4), p. 82; Dobbs-Allsopp et al., 2005, op. cit. (above, n. 8), p. 79

¹⁵ Aharoni, 1981, op. cit. (above, n. 4), p. 23, 125; Dobbs-Allsopp et al., 2005, op. cit. (above, n. 8), p. 24, 59, 108.

¹⁶ Aharoni, 1981, op. cit. (above, n. 4), p. 92, 101; Dobbs-Allsopp et al., 2005, op. cit. (above, n. 8), p. 90, 97); Aharoni's reading (ibid., p. 30-31) of a (שקל) ש in Line 5 of Arad 16 is erroneous. See Mendel-Geberovich et al., 2017, op. cit. (above, n. 3), p. 114, 117-118.

¹⁷ F.M. Cross, “Two Offering Dishes with Phoenician Inscriptions from the Sanctuary of ‘Arad”, *BASOR* 285, 1979, p. 75-78; Aharoni, 1981, op. cit. (above, n. 4), p. 115-117 respectively.

In this light I suggest translating the beginning of Line 1: “total kor measure of barley”.

The rest of the line is either unclear, missing (about four letters), or blurred by the palimpsest and hence remains incomprehensible.

Line 2: The first letter is a large *kaph* written with either two or three “ears” (see photographs) and is followed by a large *samech* and a small *pe*. It renders כסף (“silver, money”). Its form is similar to the way the word כסף is rendered in Arad 16:8.¹⁸

The rendering of the next letter is uncertain. Tentatively (with a big question mark) it might be read as the hieratic numeral 20 (assuming that the lower stroke is round rather than straight). It is followed by two missing letters and then the title מלך (“king”) (already observed by Aharoni). Tentatively I suggest restoring [ש ל] in the break and read the first half of Line 2: “silver 20² [shekel² (ש) for/of² (ל)] the king”.

Next come four letters (ב ל ל ל ת?) whose meaning is incomprehensible.

Line 3: The first part of the line (about seven letters) is incomprehensible. It ends with the letters חיל (“troop”), already observed by Aharoni.

Line 4: About 6 letters are missing and are followed by the word כסמם (“emmer”). The כֶּסֶמֶת is mentioned in Exod 9:32, Isa 28:25 and Ezek 4:9 (בְּסֻמִּים), always in the context of other kinds of grain (barley and wheat). This is the first time that כֶּסֶמֶת is mentioned in an epigraphic text of the monarchical period.

Line 5: The first three letters might be read דחן (“millet”). Millet and emmer are mentioned together in Ezek 4:9a (“You, take some wheat, barley, beans, lentils, millet and emmer and put them into a single dish and make them into bread for yourself”). Like כֶּסֶמֶת, this is the first time that דחן is mentioned in an epigraphic text of the monarchical period.

¹⁸ Mendel-Geberovich et al., 2017, op. cit. (above, n. 3), p. 115, 119.

There is a space of about five letters after the assumed דחן, and it might have included the name of another kind of grain. The space is followed by the noun עֵבֶר, “yield, grain”, which appears for a second time in Line 10 of the Arad 31.¹⁹ The noun עֵבֶר occurs once in the Bible, in Josh 5:11-12, where it appears in parallel to תְּבוּאָה, “yield, grain”. עֵבֶר is probably an overarching designation to all the grains that were listed in Lines 4-5.

Line 6: ויער[ם?] (and he piles) continues the theme of the previous line. About three letters are missing after the verbal form and are followed by the letters טה, whose restoration [ח]טה is *ad sensum*. A possible translation: “and he piles [over? it? w]heat”.

Line 7: The restoration הַנְּחָה² (“laid”) at the beginning of the line is guesswork. After a space of about four letters, the four letters ו ד ב ב appear; their meaning in this context remains obscure (דבב in biblical Hebrew means “move gently, glide”). A tentative translation: “he laid? ... and ...”.

Line 8: All nine letters in this line are large and, except for one that is missing,²⁰ are clear and readable. The text renders אר וכר [ארבע] and may tentatively be translated, “four measures of אר and kor”. The main problem is the meaning of אר. With all due caution I suggest that it reflects the local pronunciation of the hieratic measure *khar*. *Khar* (“sack”) is an Egyptian measure of dry commodities²¹ and is mentioned several times in the Arad ostraca (16: rev. 2; 25:2; 34:2; 46:4; 61:2).²²

¹⁹ Aharoni, 1981, op. cit. (above, n. 4), p. 56-58 translated Line 10 of Ostrakon 31, “46 ephahs of grain”. Lemaire (1977, op. cit. [above, n. 8], p. 199-202), translated it, “[t]otal (1) kor de grain”. In a similar manner. Wimmer (2008, op. cit. [above, n. 13], p. 39-41) translated it, “sie (sind) 1 Homer Getreide”.

²⁰ The letters ט ל ע that belong to the early text are visible above the missing letter.

²¹ Wimmer, 2008, op. cit. (above, n. 13), p. 37, 45, 51.

²² See Wimmer, 2008, op. cit. (above, n. 13), p. 264; Mendel-Geberovich et al., 2017, op. cit. (above, n. 3), p. 121.

Discussion

The text on Side A is unique, with no parallel in the corpus of ancient Hebrew inscriptions. Its author might have been Elyashib, who supervised the storehouse of Arad. Seeking to make his registrations and calculations, he erased the obverse of an ostrakon available to him and wrote on the cleared surface. Since he used the ostrakon for his own needs, he did not bother writing his text in an orderly, careful manner. The result is an uneven text, written on about three quarters of the right side of the cleared surface.

The surface of the ostrakon is badly eroded, which makes its decipherment difficult. The palimpsest and the inconsistency in the form of the letters place additional obstacles in the way of decipherment. Nevertheless, some conclusions concerning the text under investigation may be drawn.

First, the text is an economic account and probably deals with the administration of the storehouse. It deals with various matters: supply of barley (Line 1), silver (Line 2) and different kinds of grain (Lines 4-7). It possibly concludes with a calculation of the overall amount of grain (Line 8).

Second, the text mentions only grains, whereas wine and oil, which are frequently referred to in the Arad ostraca, are absent. Beside an overall amount of barley in Line 1, the text possibly mentions emmer, millet and wheat. Other kinds of grains might have been enumerated in the eroded parts of the text (Lines 4-6). The grains are designated as a yield (עֵבֶר), which was either brought to the storehouse or expended. The possible use of the verbs עָרַם ("pile) and נָוַח (הִנְחָה? "laid") fits also the economic contents of Lines 4-7.

Third, the text possibly mentions a payment of 20⁷ shekel⁷ silver to/for the king (Line 2). It also mentions troop (Line 3). Due to its fragmented state of preservation, it is impossible to give a coherent sense to these lines.

Fourth, assuming that אַר is indeed the pronunciation of Egyptian *khar* (which naturally is uncertain), the scribe summarized in the last line the amounts of grain referred to in the text.

Fifth, the ostrakon adds a few Hebrew terms for grains (בַּסֶּמֶם, דָּחַן), measures (אָר, בָּר), a verb (עָרַם) and an abbreviation (שַׁע for

שערם) so-far unattested in inscriptions dated to the monarchical period.

In sum, the text on Side A of Ostrakon 24 is unique within the corpus of monarchical Hebrew inscriptions. Although its decipherment is partial and its interpretation replete with difficulties and uncertainties, it adds a new kind of text – a draft of a personal account written by a local scribe – and some new information on the contents of the storehouse at Arad.

Part III: The King's Letter: Arad 24A as a Draft of Response to Arad 24B?

Eythan Levy and Shira Faigenbaum-Golovin

Introduction

Ostrakon 24 has been described as “the most dramatic and gripping of all the many ostraca that have been found at Arad”.²³ It is a double-sided inscription, whose inner (concave) side is fully legible (called by Aharoni the “obverse” side), and whose outer (convex) side is almost totally illegible (Aharoni’s “reverse” side). The legible side (called here Arad 24B) contains an urgent command from the king of Judah to move troops from Arad and the nearby fort of Kinah to the city of Ramat-negeb in order to protect the latter from an upcoming Edomite attack. The urgency of the matter is stressed by the words, “And the word of the king is incumbent upon you for your very life!” (Lines 17-18), one of the very rare direct references to a king of Judah in Hebrew epigraphy. The other side of the ostrakon (called here Arad 24A) is barely legible to the naked eye (Fig. 1). Aharoni identified 28 of its letters (see Fig. 4), and read 5 words (above, Part II). He considered both sides of the ostrakon to be part of the same letter, beginning with the outer side (Arad 24A) and continuing on the inner side (Arad 24B). He believed that the

²³ Aharoni, 1970, op. cit., p. 16. Y. Aharoni, “Three Hebrew Ostraca from Arad”, *Bulletin of the American Schools of Oriental Research* 197, p. 16-42, p. 16-29

letter was addressed to Elyashib, quartermaster of the Arad fort and recipient of over a dozen other Arad letters.

We propose a new reading of Arad 24A based on multispectral imaging. Our renewed examination of the sherd has revealed dozens of signs not seen by Aharoni (Fig. 5), many of which are now identifiable with a fair degree of certainty. For the others, some of which might be non-alphabetic, we provide only attempted identifications. Though the number of clearly identified letters is not high enough to render a continuous reading of the text, we have gathered sufficient data to propose an alternative interpretation of Arad 24, suggesting—*contra* Aharoni—that this ostrakon is not related to the Elyashib archive, that Arad 24A and 24B are two distinct texts, and that Arad 24A is a draft of an answer to Arad 24B. The conclusion of two separate texts is also partly backed by ink clustering analysis.²⁴

Organization of the Sherd

Whereas the lines of Arad 24B are straight and regular, those of Arad 24A are not. Clearly, line 1 slopes downward to the left, following the curvature of the sherd's upper edge. This indicates that the upper part of Arad 24B is complete, with no missing fragments. This sloping orientation can also, though more mildly, be seen in the second line. An obvious difficulty is the letters located in the leftmost part of the ostrakon (Fig. 2 [b]). In some cases, they are roughly aligned with the letters on the right part (Fig. 2 [a]), but in other cases these letters seem completely misaligned, as for example at the end of Line 7. A possible explanation for these misaligned letters is that they might be part of a former layer of script (*palimpsest*), which was erased in order to make room for the main inscription visible on the right side (see Part II above). These letters are shown in the main facsimile (Fig. 5) but will not be addressed in the epigraphic discussion below.

²⁴ See S. Faigenbaum, I. Finkelstein and E. Piasezky “Ink Separation in Multispectral Images of Iron Age Ostraca from Judah”, forthcoming.

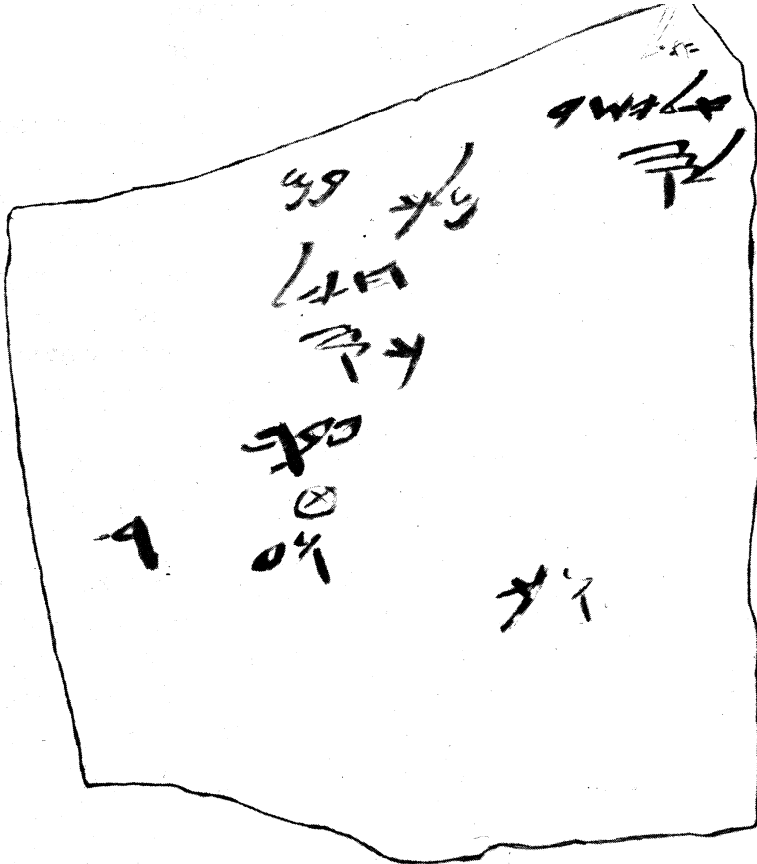


Fig. 4: Arad 24A, Aharoni's facsimile²⁵.

²⁵ Aharoni, 1981, op. cit. (above, n. 4), p. 47.

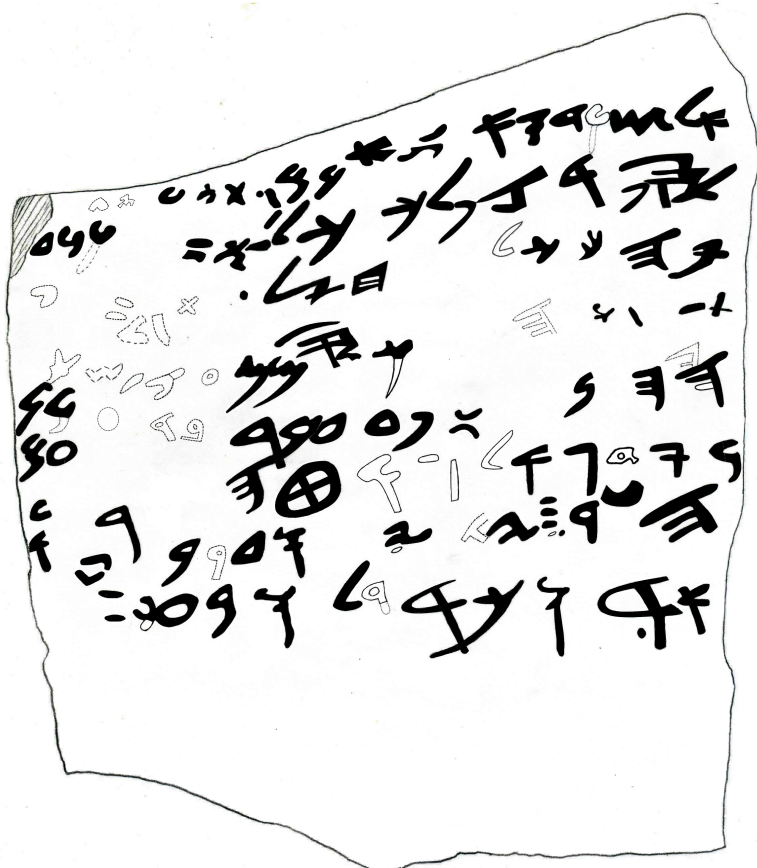


Fig. 5: Arad 24A: manual drawing (facsimile). Hollow shapes represent uncertain characters.

Text Edition

This section presents our transliteration of the text, followed by a detailed examination of each line. Signs not seen by Aharoni are colored in red.

- | | | | |
|----|------------------------------|---------------------------------|----|
| 1. | ʔlš-ʔdyʔ [] zʔʔ b/n m - tkʔ | אלש-ʔדִּיא [] זִאֲבִנְ-מֵתֵכִי | 1. |
| 2. | l sprh mlkkl--- | לִסְפָרְהָ מֵלֶכְכֵּל--- | 2. |
| 3. | bhwʔkʔʔ [] ḥyl | בְּהוֹיֵכִיʔ [] חֵיל | 3. |

| | | | |
|----|---|--|----|
| 4. | y [] - w [?] [] h [?] [] [?] / k s m m | י [] - ו [?] [] ה [?] [] א / כ ס מ מ | 4. |
| 5. | h h/h [] b/n [] t/z p ^c / d/r ^c b r | ה ה/ח [] ב/נ [] ת/ז פ/ד/ר/ע/ב ר | 5. |
| 6. | b y - g/5 [?] l [?] -- t h | ב י - ג/א 5 [?] ל [?] -- ט ה | 6. |
| 7. | h d/r [?] ≡ y [] y [] w ^c [] b | ה ד/ר [?] ≡ י [] י [] ו ^c [] ב | 7. |
| 8. | [?] r w k r - l [] w b ^c d/r [?] = [?] | א ר ו כ ר - ל [] ו ב ע [?] ד/ר [?] = [?] | 8. |

Line 0

We see no traces of the preposition ל (“to”) seen here by Aharoni. These traces have either faded or, as we tend to believe, no letters stood originally at this spot.

Line 1

[?] l š^{-?} d y[?] [] z[?] b/n m - t k[?] א ל ש - ד י א [] ז א[?] ב/נ - מ ת כ[?]

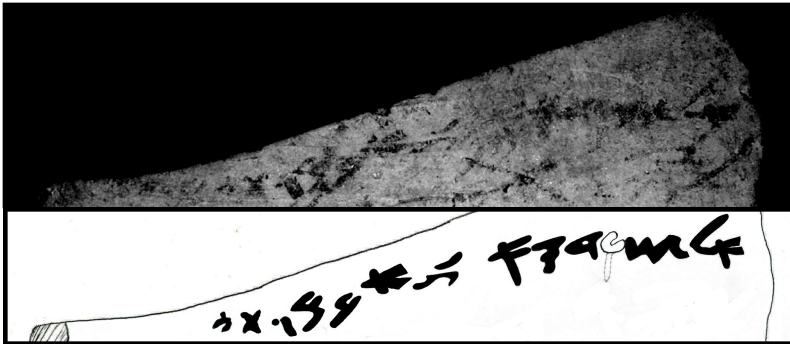


Fig. 6: Line 1, image and facsimile.

We cannot confirm Aharoni’s reading [?]lyšb. The initial [?] and l are clear, as is the following š. A curved stroke appears to the right of the š but the space after the l seems too small for an additional letter. After the š, shallow traces of an open round sign (possibly with a leg) hint at a possible additional letter. Follows a d (r or h seems less likely here), a y, an [?] and a vacat or a lacuna. The next letter, possibly a z, is damaged. It is followed by a clear [?], a b or a n, and an

m. Then comes a diagonal stroke,²⁶ either part of a now somewhat effaced letter, or, if non-alphabetic, the hieratic numeral 1 or a diagonal abbreviation stroke. The next letter is a *t*, followed by the possible head of a *k*. The initial ׀ is most probably the preposition “to” introducing the letter’s recipient (cf. Arad 1-12, 17, 18, Lachish 2, 16).²⁷ An exhaustive search for biblical and Paleo-Hebrew anthroponyms yields no suitable name²⁸ after ׀, hence we posit a hitherto unattested name,²⁹ possibly preceded by a title. The remainder of the line is unclear and does not match standard lexemes known from openings of Paleo-Hebrew letters, such as *wʿt* (“and now”), *šlh* (“send”), *šlm* (“peace”) or *brtkk* (“I have blessed you”).

²⁶ The stroke is thinner than it looks in the black and white picture, as it is crossed by a diagonal stain (visible in the color picture).

²⁷ It is less likely that ׀ is part of a theophoric name, as known Paleo-Hebrew letters starting with the sender’s name are introduced by ׀*mr* (‘Ajrud 18, 19, Murabba‘at) or a relational word (e.g. *bnk*, ‘*bdk*, cf. Arad 16, 21, 40, Lachish 3).

²⁸ The search for anthroponyms was conducted using the SCRYPT software (available at <https://www.scryptapp.com/>; see also E. Levy and F. Pluquet, “Computer Experiments on the Khirbet Qeiyafa Ostrakon”, *Digital Scholarship in the Humanities* 32, 2017, p. 816-836) and Golub’s *onomasticon*, which records all anthroponyms in provenanced Iron Age Hebrew inscriptions (M.R. Golub, “A Digital Onomasticon: Personal Names from the Iron II Southern Levant”, 2018, <http://onomasticon.net>).

²⁹ Names ending in *yʿ* appear in late biblical books (1 Chr 4:16, 7:39, 8:9, 11:44 and Est 9:8) but not in provenanced Paleo-Hebrew inscriptions (see Golub, 2018, op. cit. (above, n. 28)). Other names ending in *ʿ* are epigraphically attested however (e.g. *mkʿ*, see Y. Shoham, “A Hebrew Seal and Seal Impressions”, in *Excavations in the City of David 1978-1985 Directed by Yigal Shiloh, Vol. VI: Inscriptions*, ed. T.D. Ariel, Jerusalem, The Hebrew University, 2000, p. 81-84), with the *ʿ* abbreviating a theophoric ending. An alternative would be a name ending in ׀, if we restore an effaced *l* in the space after the second ׀.

Line 2

l s p r h m l k k l ---

--- ל ס פ ר ה מ ל כ כ ל

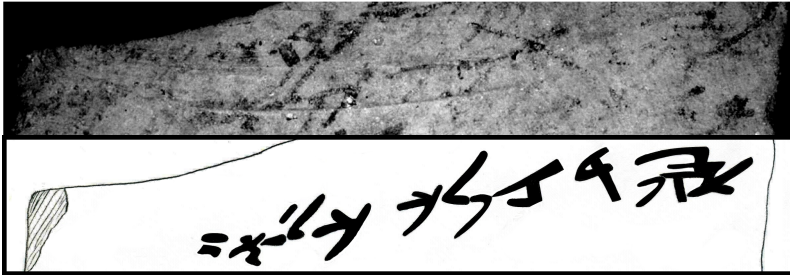


Fig. 7: Line 2, image and facsimile.

The initial *l* and *s* are clear, followed by shallow but visible *p* and *r*. The following *h* is preserved in its upper portion, before Aharoni's shallow but recognizable *m*, *l* and *k*. We then have a clear *k*, *l* and traces of three letters, the first possibly an *l*. The start of the line clearly spells *l spr hmlk* ("To the letter/scribe³⁰ of the king").³¹ This expression, referring to a royal letter, is known from Lachish 6: *šlh ʿdny ʿ[t sp] r hmlk [wʿt] spry hšr [m]* ("my lord sent the king's [lette]r [and] the letters of the officer[s]"). The ensuing *kl* might then refer to "all" the contents of the royal letter.

Line 3

b h wʳ kʳ lʳ [] ḥ y l

ב ה וֹ כֹ לֹ [] ח י ל

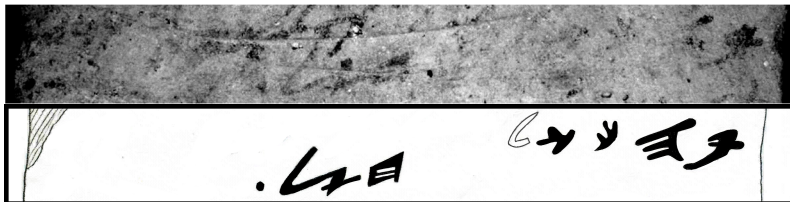


Fig. 8: Line 3, image and facsimile.

³⁰ For *spr hmlk* as a royal scribe, see 2 Kings 12:11, 2 Chr 24:11, Est 3:12, 8:9.

³¹ The reading *spr* was also independently suggested by Renz, who transcribed here *l sʳ pʳ [r - -] m l k* (J. Renz, 1995, op. cit. (above, n. 8), p. 391).

The first letter seems to be a *b* (less likely a *y*),³² followed by a shallow but certain *h*. The next signs are very shallow: maybe the head of a *w*, the head of a *k*, and an *l*, thus possibly spelling *wkl* (“and all”), continuing the *kl* of the preceding line. After a lacuna comes Aharoni’s clear *hyl* (“combat, soldier”), followed by a dot.

Line 4

y [] - w[?] [] h[?] [] ? / k s m m

מ מ ס כ/א [] ? ה [] ? י - [] י

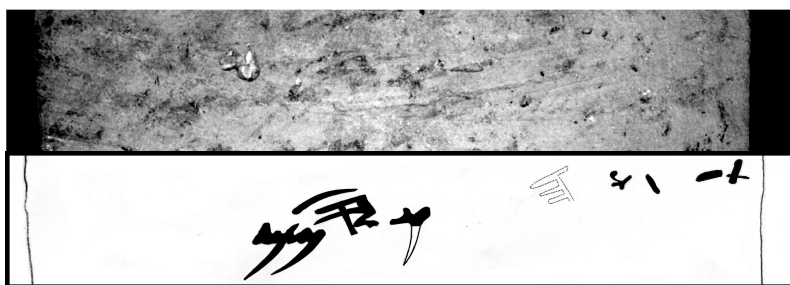


Fig. 9: Line 4, image and facsimile.

The first letter seems to be a *y*, followed by a long lacuna with possible traces of a diagonal stroke, the head of a *w* and an *h*. The next letter was identified by Aharoni as a *k* but its head also resembles an *?*. Aharoni’s subsequent *s* is certain, followed by two shallow *m*. With so few letters and no clear dividers, only speculations can be offered. If the central sequence starts a new word, *’sm* (“storehouse”) comes to mind. Otherwise, *mks* (computation, tax) and *nks* (riches) are also possible guesses.

³² Note that the horizontal line extending right of the vertical shaft is more typical of *y*, which would enable a reading *yhwkl*, a name well known in Paleo-Hebrew epigraphy (see Golub, 2018, op. cit. [above, n. 28]) and attested in Arad 21. The sign’s left-slanting tail is typical of *b* however and renders a reading *y* more difficult (but note that our scribe does sometimes produce spurious left-slanting tails, as in the *h* of Line 6).

Line 5h h/h [] b/n [] t/ z p^c/d/r^c b r

ה ה/ח [] ב/ג [] ת/ז פ/ע/ד/ר ע בר

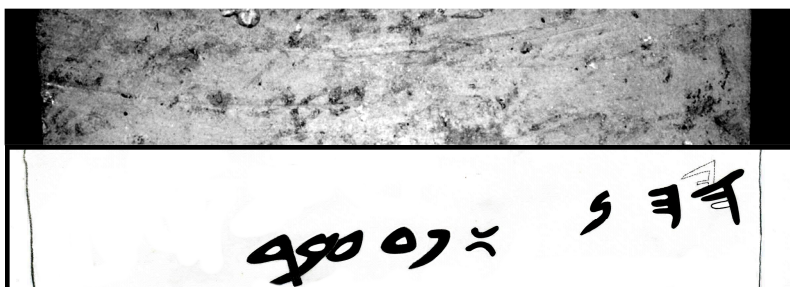


Fig. 10: Line 5, image and facsimile.

This line curves downward, as the scribe probably followed the curved wheel marks visible on the sherd. The first letter is an *h*, with additional traces of ink above it (erased letter? palimpsest?). The next letters are an *h* or a *h*, followed by a short space and a shallow *b* or *n*. After a lacuna, we have a shallow *t* or *z* (damaged by the wheel mark), a *p*, and an ^c (or a partly effaced *d* or *r*). Then comes Aharoni's 'br ("to pass" [cf Arad 5, 24] or, alternatively "agricultural produce" [cf Arad 31, 111]), the only clear word that can be restituted in this line.

Line 6b y - g/5^l -- t hב י - ג/א 5^ל -- ט ה

Fig. 11: Line 6, image and facsimile.

The first letter is a *b*, obscured by stains,³³ followed by a clear *y*. Then comes an irregular roundish sign, rendered tentatively in the facsimile. Under it lies a crescent-shaped sign, which might, or not, belong with it. The next sign is a large *g* or the hieratic numeral 5.³⁴ A clear *ʾ* follows and shallow traces of a possible *l*. The next signs are unclear and their renderings in our facsimile are tentative. We then have Aharoni's clear *ṭ*, and an unusual *h* with a left-slanting tail. Only speculative readings can be offered at this point. A cautious proposal for the start is *byd* ("in the hands of"), perhaps followed by a name based on the root *gʾl*³⁵ (see Lachish 9 and Arad 16, 17, 24B for *byd* introducing an individual). Alternatively, the fourth sign is a numeral followed by the preposition *ʾl* ("to") and a place-name (cf. "from Arad, 5" in Arad 24B). Examples of Judahite towns matching the ensuing *ṭ* and *h* are *ḥmṭh* (Jos 15:54), and *yṭh* (Jos 21:16). Another possibility for the last word is *ḥṭh* ("wheat") (cf. the plural form *ḥṭm* often attested in Arad).

Line 7

h d/rʾ ≡ y [] y [] wʿ [] b

ב [] יוּע [] י [] י ≡ ʾ/ד/ה



Fig. 12: Line 7, image and facsimile.

³³ The shape of the letter's head and leg appears when examining the sign under diverse wavelengths.

³⁴ See the partly damaged numeral in Arad 24B, Line 1, which has been interpreted as 5 or 50. See Wimmer, 2008, op. cit. (above, n. 13), p. 35.

³⁵ The name *gʾl* appears on a Hebrew seal, see D. Ben-Ami and H. Misgav, "A Late Iron Age II Administrative Building Excavated in the City of Jerusalem", in *From Sha'ar Hagolan to Shaaraim: essays in honor of Prof. Yosef Garfinkel*, ed. S. Ganor, I. Kreimerman, K. Streit, and M. Mumcuoglu, Jerusalem, Israel Exploration Society, 2016, p. *103-*110 (Hebrew). For *gʾlyhw*, see Arad 16 and 39 (among others).

The first letter is a clear *h*. The next letter is badly preserved, probably a *r* or *d*. Then follow three short horizontal lines and a *y* followed by a *vacat* or a lacuna (see facsimile for possible additional traces). Then apparently comes a second *y*. After another *vacat* or a lacuna, comes a *w*, a *ʿ* and a *b*. The facsimile shows potential traces of a small sign before the *b*, possibly belonging to an earlier layer (palimpsest).

Line 8

ʿ r w k r - l [] w b ʿ d / r ʿ =

= א ר ו כ ר - ל [] ו ב ע ʿ ד / ר ʿ =

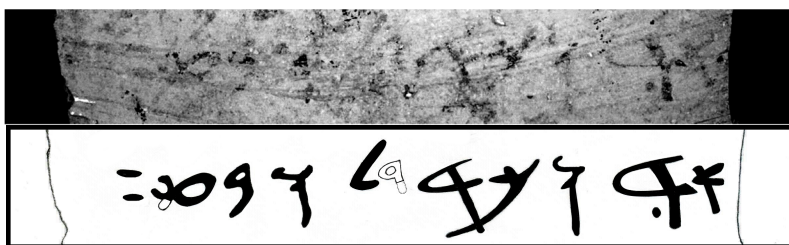


Fig. 13: Line 8, image and facsimile.

The initial ʿ is certain. Then comes a large and somewhat unusual *r*, with a possible divider under it. We concur with Aharoni's subsequent *w* and *k*. We then have a second *r*, followed by an unclear, possibly roundish, letter, and a clear *l*. After a small *vacat* (or lacuna), we have a *w*, a *b* and a large sign resembling a mathematical infinity symbol. It contains either two touching letters (*ʿ* followed by *d* or *r*?) or a non-alphabetic sign. Then follow two horizontal strokes, possibly the hieratic numeral 8.³⁶ Assuming a divider after the first *r* and a *vacat* after the *l* yields two sequences starting with *w*, possibly the conjunction “and”. The second element would then be *kr-l*, which yields only 3 matches in biblical Hebrew: *krbl* (“be-mantle”), *krml* (Mount Carmel or town in Judah) and *krml* (“plantation”, “fruit”).³⁷ The Judahite town could offer a possible reading,

³⁶ These traces can also be understood as part of the two parallel wheel marks visible at the extremity of the sherd.

³⁷ An additional match, but in defective writing, would be *krmyl* (crimson, carmine).

as it is located near Zif, a town mentioned in Arad 17. The trouble here is that *m* seems a difficult match for the visible remains of the third letter. The initial letters *ʔr* do not seem to constitute a word on their own and might thus continue the *b* of the preceding line.³⁸ A toponymic reading *bʔr* could then be proposed, maybe an abbreviation for Beer-Sheva or for Baalath-beer (Jos 19:8). As for the final element introduced by the second *w*, it could, very tentatively, be read as *bʔr* (“in the town”), possibly followed by the hieratic numeral 8.³⁹ A list of toponyms followed by numerals finds a parallel in Arad 24B, which contains “from Arad 5, and from Kinah [...]”. The resulting reading, “Beer, and Carmel and in the town 8”, is admittedly speculative, despite the high number of readable letters.

Conclusion

The new photographs show that, *contra* Aharoni, Arad 24A is not the start of 24B, as the two handwritings are different, a conclusion also backed by ink clustering analysis. Regarding decipherment, not much can be said with certainty, due to the inscription’s poor state of preservation. In addition to the words *hyl* and *ʔbr* already seen by Aharoni, only the syntagm *lspr hmlk* could be deciphered with a strong level of confidence. This expression is known from Lachish 6 (partly reconstructed, see above), where it refers to a previously received royal letter. Furthermore, all clear references to a letter (*spr*) in Paleo-Hebrew ostraca refer to letters previously sent or received.⁴⁰ We therefore propose that Arad 24A is a draft of an answer to the royal letter of 24B. Since royal letters are extremely rare in the Paleo-Hebrew corpus (Arad 24B and 88 being the only known cases), as is the expression *lspr hmlk* (known only from Lachish 6), their occurrence on both sides of the same sherd is

³⁸ Alternatively, the sherd’s concavity at the start of the line might imply an initial letter lost to erosion or break.

³⁹ The word “*ʔyr*” appears *plene* in Arad 24B and Lachish 4, but is defective at ‘Ajrud and on a bulla from Jerusalem (T. Ornan, S. Weksler-Bdolah, and B. Sass, “A ‘Governor of the City’ Seal Impression from the Western Wall Plaza Excavations in Jerusalem”, *Qadmoniot* 154, 2017, p. 100–103 [Hebrew]), both in the expression *lšr ʔr* (“Belonging to the governor of the city”).

⁴⁰ Cf. Dobbs-Allsopp et al., 2005, op. cit. (above, n. 8), p. 715.

probably not a coincidence, and hints at a strong link between the two texts. The hypothesis of a draft would also nicely account for the strong irregularities of the script, possibly featuring idiosyncrasies and abbreviations, which render the decipherment so difficult. It would also account for two other peculiarities. First, the text starts along the sherd's curved upper edge, as opposed to most ostraca, which start along a straight edge in order to induce straight lines of script. Second, the surface of Arad 24A is very rough, with many wheel marks, while scribes usually favor smoother surfaces, like that of Arad 24B. The scribe's choice of ignoring these two difficulties, rather than picking a straighter and smoother sherd, probably also hints at an organic link between the two sides. Finally, the practice of writing a follow-up to a given text on the sherd's verso is indeed attested at Arad (cf Arad 17). We thus conclude, with all due caution, that Arad 24A is a draft of an answer to 24B, and, like it, probably relates to a military context, as also hinted by the clear word *hyl* ("soldier", "combat") in Line 3.

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