

“... Of the Sidonian[s]”: a Persian period inscription on a Phoenician amphora found underwater near Tel Achziv, Israel¹

Christopher A. Rollston^a, Jacob Sharvit^b, Meir Edrey^c, Paula Waiman-Barak^d, Assaf Yasur-Landau^c

^a Department of Classical and Near Eastern Languages and Civilizations, George Washington University, Washington, D.C., USA

^b Israel Antiquities Authority, Caesarea, Israel

^c The Leon Recanati Institute for Maritime Studies and the School of Archaeology and Maritime Cultures, University of Haifa, Haifa, Israel

^d The Sonia and Marco Nadler Institute of Archaeology, Tel Aviv University, Tel Aviv, Israel

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Abstract

This is the first publication of Persian period pottery found underwater near Tel Achziv, including a Phoenician amphora bearing a two-line inscription containing the phrase “of the Sidonian[s]”. The petrographic analysis of this amphora indicates an origin in the Lebanese coast between Tyre and Sidon. These finds may reflect a maritime itinerary along the Phoenician coast between Sidon, “a city with an enclosed harbor”, and Achzib, a city “with a river”, as mentioned in the 4th-century BCE Periplus of Pseudo-Scylax.

Introduction

Achzib, in northern Israel, was a flourishing Phoenician town during the Iron Age and Persian period, as indicated by excavations at Tel Achziv and in adjacent cemeteries (e.g., Prausnitz, 1993; Mazar, 2001, 2004; Yasur-Landau et al., 2016). Petrography analyses of amphorae from late Iron Age storerooms on the tell (Waiman-Barak et al., 2017) have shown that the site functioned as an anchorage connecting Tyre and other coastal cities in the Phoenician heartland with ‘Akko and sites farther south; however, to date, only meager finds related to the maritime trade activity of Achzib have been found underwater. The aim of this article is to present the Persian period pottery recovered in underwater surveys

and the first Phoenician alphabetic inscription found underwater in Israel.

The finds

The Persian period pottery under discussion was found in underwater surveys undertaken in two locales (Fig. 1) by the Israel Antiquities Authority Marine Archaeology Unit: The first (Fig. 1: no. 1) lies about 1.2 km west of Naḥal Kziv’s outlet, at a depth of 20 m (Permit No. S-663/2016, Dive Report 44, map ref. NIG 208788/773552). This locale yielded two upper body parts of amphorae, one of which is inscribed, along with four large amphora

¹ RTI scans of the inscription were made courtesy of the Israel Museum. We thank Eran Arie and Michael Magen for conducting them.



Figure 1. Location map of the finds near Tel Achziv, west of Naḥal Kziv's outlet (1) and west of Tekhelet Island (2) (prepared by R. Nickelsberg and J. Sharvit).

body sherds, their inner side covered with resin (Figs. 2: 1–2; 3–4). The second locale (Fig. 1: no. 2) lies west of Tekhelet Island, about 1.5 km from the shoreline and at a depth of 31 m (Permit No. S-663/2016, Dive Report 60, map ref. NIG 208744/776139). Here, a complete amphora was found (Fig. 2: 3).

Typology and relative chronology

The amphorae found underwater near Tel Achziv (Fig. 2: 1–3) belong to the carinated-shoulder type—the most common type of amphora used during the Persian period. These neckless jars have an elongated body, a sharply carinated shoulder and crudely made, often twisted, loop handles, and they date to the 6th–4th centuries BCE. They were used for maritime transportation and are therefore found commonly along the entire southern Levantine coast, from Syria to Egypt, but also at sites throughout the western Mediterranean. The

amphorae found at the site have slightly everted rims and a biconical body with a narrow mid-body waist, unlike those with an ovoid body and bag-shaped bottom, which are more typical of the 5th–4th centuries BCE (Stern, 1995: 58–62; 2015: 570–571 [Type 4]; Bettles, 2003b: 65–66 [Type A]; Regev, 2004: 341–344; Tsuf, 2018: 210).

The inscription on Amphora 44-2

A two-line Phoenician inscription was incised below the waist of Amphora 44-2. Additional marks are found on the jar's shoulder, just below the carination point. The worn condition of the jar's surface does not enable to determine how many letters were originally incised. The script on the amphora was not the work of the careful hand of a highly trained scribe but rather that of a semi-literate person (Fig. 4)—that is, the handwriting is only partially legible. This may be because during the second

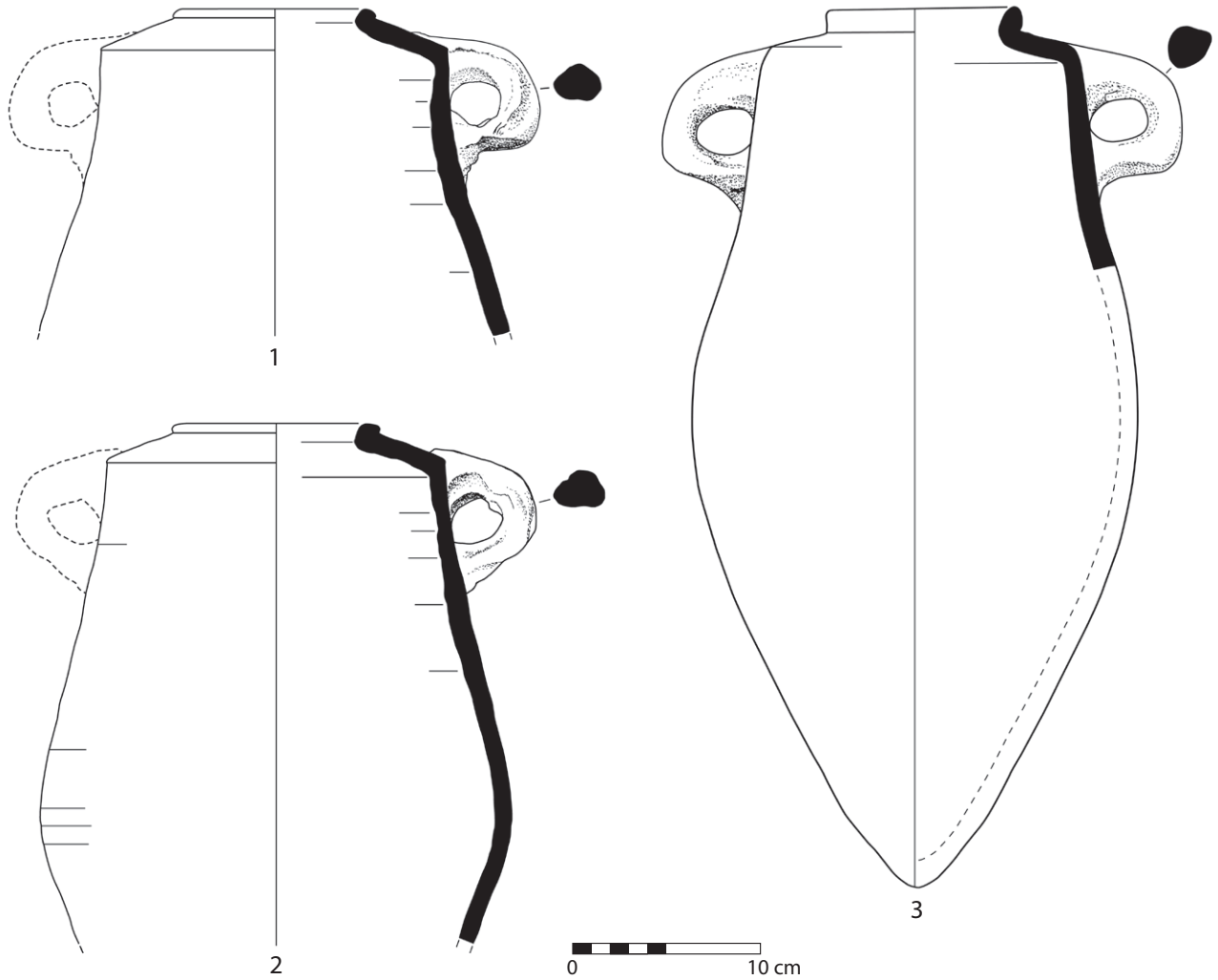


Figure 2. Amphorae found underwater near Tel Achziv (prepared by M. Edrey).

No.	Type	Reg. No.	Locus	Description	Parallels
1	Amphora	44-3	44	Tan/light-brown clay, gray core with few white and dark grits	Apollonia, Str. 2 (Tal, 1999: fig. 4.13: 23); Keisan, Str. 3b (Briend and Humbert, 1980: pl. 18: 1a); Shavei Zion (Edrey et al., 2020: fig. 4: 7); Sarepta, Area Y, Level 4 (Bettles, 2003a: fig. 3: SR 12)
2	Amphora	44-2	44	Reddish-orange clay and core, few large white and dark grits	Apollonia (Tal, 1999: fig. 4.40: 7); 'Atlit (Johns, 1933: 50, fig. 3: a); Shavei Zion (Edrey et al., 2020: fig. 4: 15); Sarepta, Area Y, Level 4 (Bettles, 2003a: fig. 3: SR 13)
3	Amphora	59-02	59	Tan/light-brown clay	Loḥamei Hageta'ot, Tomb 14 (Messika, 1996: fig. 3: 4); Shavei Zion (Edrey et al., 2020: fig. 4: 13); Tel Michal, Stratum VI (Singer-Avitz, 1989: fig. 9.10: 6)

half of the 1st millennium BCE in the Levant, literacy was not the sole domain of trained scribes and officials (e.g., in city-states and kingdoms) but was gradually spreading among some commoners as well, including those engaged in the trades. As a result, inscriptions by those we term “semiliterate” may not have been the most elegant or refined (Rollston, 2006, 2012: 193–196).

Generally, the content of inscriptions on jars and pottersherds (in various Northwest Semitic dialects of the Iron Age) is varied but often falls within certain boundaries. For example, fairly frequently, inscriptions on clay vessels will refer to commodities they once contained or to their producer, owner or recipient, and sometimes even to the container itself (e.g., the Old Hebrew ostraca



Figure 3. Front and back view of Amphora 44-2 (photo by J.J. Gottlieb).

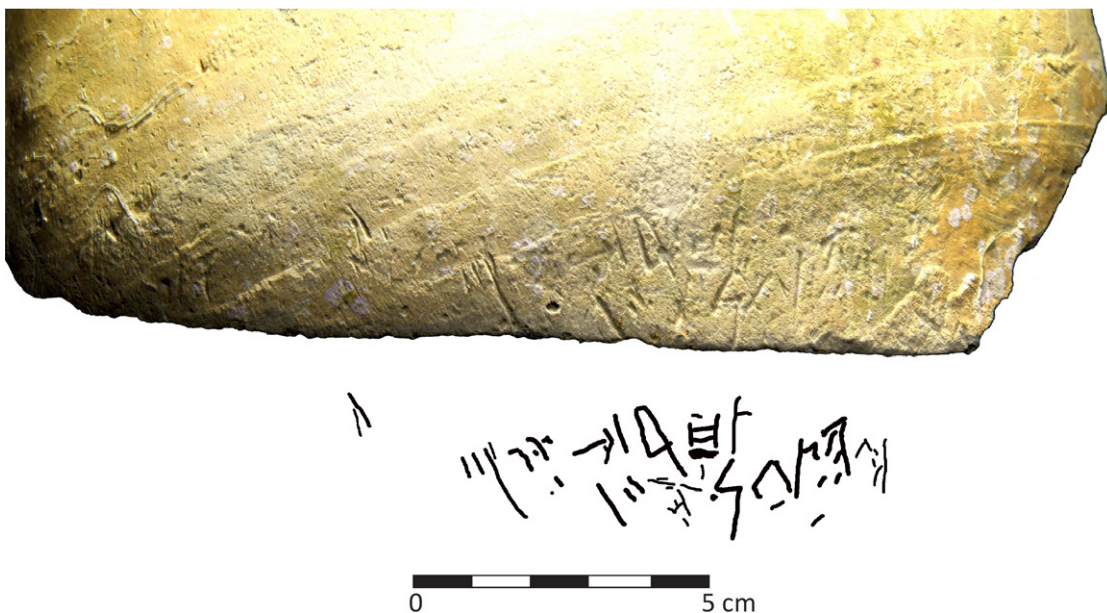


Figure 4. Inscription on Amphora 44-2 (prepared by C. Rollston).

from Samaria; *KAI* 183–187; Dobbs-Allsopp et al., 2005: 428–487). Sometimes, there is even reference to the site from which the commodity hailed or that to which it was being sent (e.g., jar handles from Gibeon inscribed with Old Hebrew, some of which contain reference to the site of Gibeon [*Gb'n*]; Dobbs-Allsopp et al., 2005: 169–180). Some inscriptions present a combination of these references. Thus, as a point of departure, we emphasize that these examples are all typical of inscriptions on pottery. Among the growing corpus of Persian period Phoenician inscriptions are two on a jar from Shiqmona, written in ink, both mentioning a personal name (son of Matton), a regnal year (but the name of the king is not preserved) and “wine from Gat Carmel” (see Cross, 2003, with reference to additional Phoenician inscriptions from the Persian period). There are also several ostraca and jar inscriptions from ‘Akko, including a rather long (seven lines) ink inscription on a Persian period jar (Dothan, 1985) and a jar purchased in Gaza, with an ink inscription that reads “wax, improved wine of Gaza” (Naveh, 2009, with reference to additional Phoenician inscriptions from the Persian and Hellenistic periods).

As noted, the difficulty with the inscription from Achzib is that the script not only reflects the modest abilities of a semiliterate person, but it is also abraded in places. Thus, even some of those signs that may have been decipherable prior to the amphora’s postdepositional history are no longer so. Furthermore, a general problem with incised inscriptions on vessels—not just the one from Achzib—it that it is difficult to incise letters particularly well (i.e., with proper morphology and stance) on a surface with such a curvature. To make matters worse, this inscription seems to have been inscribed after firing rather than when the clay was leather hard, which would have made the process even more difficult and the clay surface more prone to breakage. The Achzib inscription must have been incised using a sharpened iron implement; the biblical reference to an iron pen (*et barzel*; Jer. 17:1; Job. 19:24) arguably demonstrates this inscription method. Dating the paleography of the Achzib inscription is also hindered by the low caliber of the script, as well as the heavy abrading of the letters. Nevertheless, a date in the range of the 5th–4th centuries BCE is entirely reasonable, as suggested by the amphora’s typology and the basic morphology of the Phoenician script (for a discussion of the Phoenician

script series and references, see Peckham, 1968: 66–69; Amadasi Guzzo, 2014; Xella, 2017).

The lines of the inscription (Fig. 4) are neither neat nor parallel and written so closely together that the left end of the first line ultimately descends into the second. In addition, the abrasion of the vessel surface and various striations on it make a precise reading even more difficult and uncertain. The drawing of the inscription reflects our interpretation of the letters and traces that we identified. Moreover, within the discussion that follows below, we walk the reader through the process that we went through to read this difficult inscription.

The first line presents a letter that is arguably a *rēš* (we are disinclined to read this letter as a *dālet*, based on the morphology of the traces present, although that remains a possibility). The traces preceding it are consistent with those comprising a *ḥêt* (we are disinclined to read a *mêm* here, based on the morphology of the traces present, although one may construe certain traces as a *mêm*). Preceding the possible *ḥêt* are traces that could be understood as part of a *tāw* or a *šādê*. After the *rēš* there is an abraded area (with some traces), which would be sufficient for about three letters. After this area is either a *mêm* in a fairly anomalous stance or a *šin*. The difficulty with the latter is that there does seem to be a long “vertical” downstroke, which would not be consistent with a *šin*; however, it is possible to construe it as a deep striation of some sort rather than the traces of a stroke of a letter.

The second of the two lines is difficult to decipher, but a reasonable reading for a portion of it may be posited. Traces at the very beginning of the legible portion may belong to either a *kāp* or a *mêm* (along with some striations in the pottery, creating additional possibilities). While it is particularly tempting to read these traces as a *kāp*, as would restoring the letters *mêm* and *lāmed* prior to the *kāp* (thus, yielding the Northwest Semitic word *mlk*, “king”), offering these restorations on the basis of so few traces is too speculative. In any case, these traces are followed by letters that can be reasonably read as follows: *ḥšdn*. The *ḥê* is not perfectly formed, and portions of this letter are abraded, but the traces are quite consistent with those of a *ḥê*. The *šādê* is mostly but not entirely preserved. Some might attempt to posit a *tāw* for these traces, but this would be a more difficult reading. The *dālet* is abraded, and some may posit that the

traces are those of an *ʾayin* or a *gîmel*, but either of these would also be more difficult to read. The *nûn* is very clear and fully preserved. Some might posit that there is a word-divider after the *nûn*, but this is perhaps just a pitted area in the pottery. Following it is a very abraded area; however, it would be tempting to read a *yôd* and a *mêm* after the *nûn*. The former might be present but the latter does not seem to be the case. To conclude, we consider reading the letter sequence of *hšdn* to be entirely reasonable, and it accounts quite readily for the traces present. The place name *šdn* (Sidon) is a particularly logical way of understanding this letter combination. Thus, the reading of lines one and two is as follows: (1) [] . ḥ r . . . m (or š) (2) . ḥ š d n.

As for the reading *hšdn*, note especially the inscription on the Tabnit sarcophagus, dated to the close of the 6th century BCE (*KAI* 13, lines 1, 2), with *šdnm*; the early-5th-century BCE Eshmunazar sarcophagus inscription (e.g., *KAI* 14, lines 1, 2), with *šdnm*; and one of the Bodʾaštart inscriptions, from around the 5th century BCE (*KAI* 15), with *šdn* and *šdnm* (see also *KAI* 16), all of which are from Sidon. Note also, from Limassol on Cyprus, the reading *mlk šdnm* on an inscription from around the 8th century BCE (*KAI* 31, line 1). Perhaps especially significant for our purposes is the Phoenician and Greek bilingual inscription from Athens (*KAI* 53, line 2), dating to about

400 BCE, with the words *ʾbdšmš hšdny*, ʾAbdšamš the Sidonian. The presence of the definite article in this case is particularly significant with regard to the Achzib inscription.

At the top of the jar fragment are several hash marks in three groupings (each with a different stance) (Fig. 5). Namely, there are three hash marks just above the carination, four just below the carination and two at the uppermost portion of the preserved sherd (slightly above and off to the side of the three hash marks). While these may be simply decorative elements, it could be reasonably posited that they are numerals (with each hash mark signifying “one”), hence, the top line signifying “two”, the next line, “three”, and the line below the carination, “four”. For the morphology and stance of hash marks as numerals, Wimmer’s work is systematic and authoritative (see especially Wimmer, 2008: 195–203). Notice that there does not appear to be any letter or number to the right of these putative numbers (see also the Arad Ostraca, where the letter *bêt* stands for the unit “bath”; e.g., Wimmer, 2008: 27–32). Furthermore, the incised horizontal line (on the left side of the photo), at least as it is preserved, does not seem to signify a number (e.g., it does not appear to be a hash mark of any sort nor does it correspond nicely to a hieratic number).



Figure 5. The numerals(?) on the shoulder of Amphora 44-2 (photo by J.J. Gottlieb; prepared by C. Rollston).

Thus, although fragmentary and difficult to decipher, it is reasonable and plausible to understand the Achziv inscription as containing a reference to "... the Sidonian[s]" or "... of the Sidonian[s]". This is not surprising, of course, given the geographic location of the find and the thriving maritime trade in the region during its time. Nevertheless, it is a most welcome addition to the corpus of Phoenician inscriptions from this period.

Petrography

Two of the Phoenician amphorae (Fig. 2 :1–2) were analyzed by ceramic petrography (for the methods, see Quinn, 2013; Badreshany and Philip, 2020; Waiman-Barak et al., 2021). The clay recipes of the vessels were described according to their mineralogical compositions and classified to appropriate petrofabric groups—that is, ceramics that were manufactured from clay sources in a specific geographic region. Both vessels were found to be of the same petrofabric (Fig. 6): Lebanon/southern coast/calcareous clay, with some globigerinal marl, quartz and biogenic sand. The clay is carbonatic with iron ooids and yellowish to tan in plane-polarized light. The matrix is very rich in microfossils, including planktonic foraminifera, such as *Globigerinella*. In some cases, the foraminifera are filled or surrounded by iron-rich minerals. This petrofabric also includes benthonic foraminifera, such as *Brizalina*, and coralline algae, such as *Amphiroa* and bryozoan (Nolet and Corliss, 1990; Clark and BouDagher-Fadel, 2001). The inclusions consist of subangular to angular coastal quartz (5–15%, 50–150µm), limestone (~5%, up to 200µm) and chert in different levels of erosion. These vessels were produced of well-levigated clay and present a light-yellow ("golden") color, well-known among the common Phoenician production in the Levant since the early Iron Age. In this case, mineralogical properties of the clay caused its color to change to gray in the submerged environment in which the jars were found (Ogloblin Ramírez et al., 2020).

Several successions from Lebanon that are characterized by accumulated marine deposits have been subjected to microfacies investigations (e.g., Basson and Edgell, 1971; Walley, 1998; Nader et al., 2006; Nader, 2011: fig. 2; Pearson and Matthews, 2011). Neogene marls with quartz, shell fragments and coralline algae are found in

the vicinity of Tyre and Sidon. This was the dominant petrofabric in Bettles' study of late Iron Age and (mainly) Persian period Phoenician carinated-shoulder transport jars identified as originating in Sarepta. Bettles based her identification on a comparison with waste products of the kilns at the site (Group 1A; Bettles, 2003a, 2003b). This type of marl is well documented in other petrographic and archaeometric studies and commonly identified as originating in the southern Lebanese coast (Griffiths, 2003, 2004; Aznar, 2005: Fabric 4A; Ownby and Griffiths, 2009; Ownby, 2012; Miguel Gascón and Buxeda i Garrigós, 2013; Gilboa and Goren, 2015: Group Mi1, fig. 4: 4; Gilboa et al., 2015: Group B; Waiman-Barak, 2016). The suggested provenance for this petrofabric group is the Lebanese coast between Tyre and Sidon, 50 to 65 km north of Tel Achziv.

A large group of late Iron Age amphorae of this fabric was found at Tel Achziv itself in a storage complex dating to this period (Yasur-Landau et al., 2016; Waiman-Barak et al., 2017). In recent years, a detailed large-scale multidisciplinary study of late Iron Age and Persian period amphorae from Tell el-Burak has shown how this petrofabric was used to produce amphorae on an industrial scale, possibly as part of a regional trend (Schmitt et al., 2018; Badreshany, 2020).

Discussion

The underwater finds near Tel Achziv of Persian period amphorae originating in the coast of Lebanon join other indications of continuity of late Iron Age maritime activities along the coast of the western Galilee into the 4th century BCE. At the offshore cultic site of Shavei Zion, south of Tel Achziv, amphorae, other vessels and later figurines were continuously deposited underwater between the 7th and 4th centuries BCE (Edrey et al., 2020). As there is no late Iron Age or Persian period site in the immediate vicinity of Shavei Zion, it is likely that people from nearby Achziv were involved in this deposition. South of Shavei Zion a cargo of pottery including amphorae of the (early?) Persian period was found 500 m offshore, west of the village of Bustan Hagalil (formerly the Philadelphia Youth Village), located immediately north of 'Akko (Raban, 1976).

At Achziv itself there is some evidence of continuous habitation even after the destruction of the late

Iron Age Phase 4 and the likely collapse of the settlement system in the northern part of the 'Akko Plain in the 6th century BCE, which was a possible result of the 571/2 campaign of Nebuchadnezzar against Tyre

(Yasur-Landau et al., 2016: 220). While burials continued from the Iron Age into the Persian period in the northern cemetery of Achzib (Mazar, 2009–2010), little is known about the Persian settlement on the tell itself. The

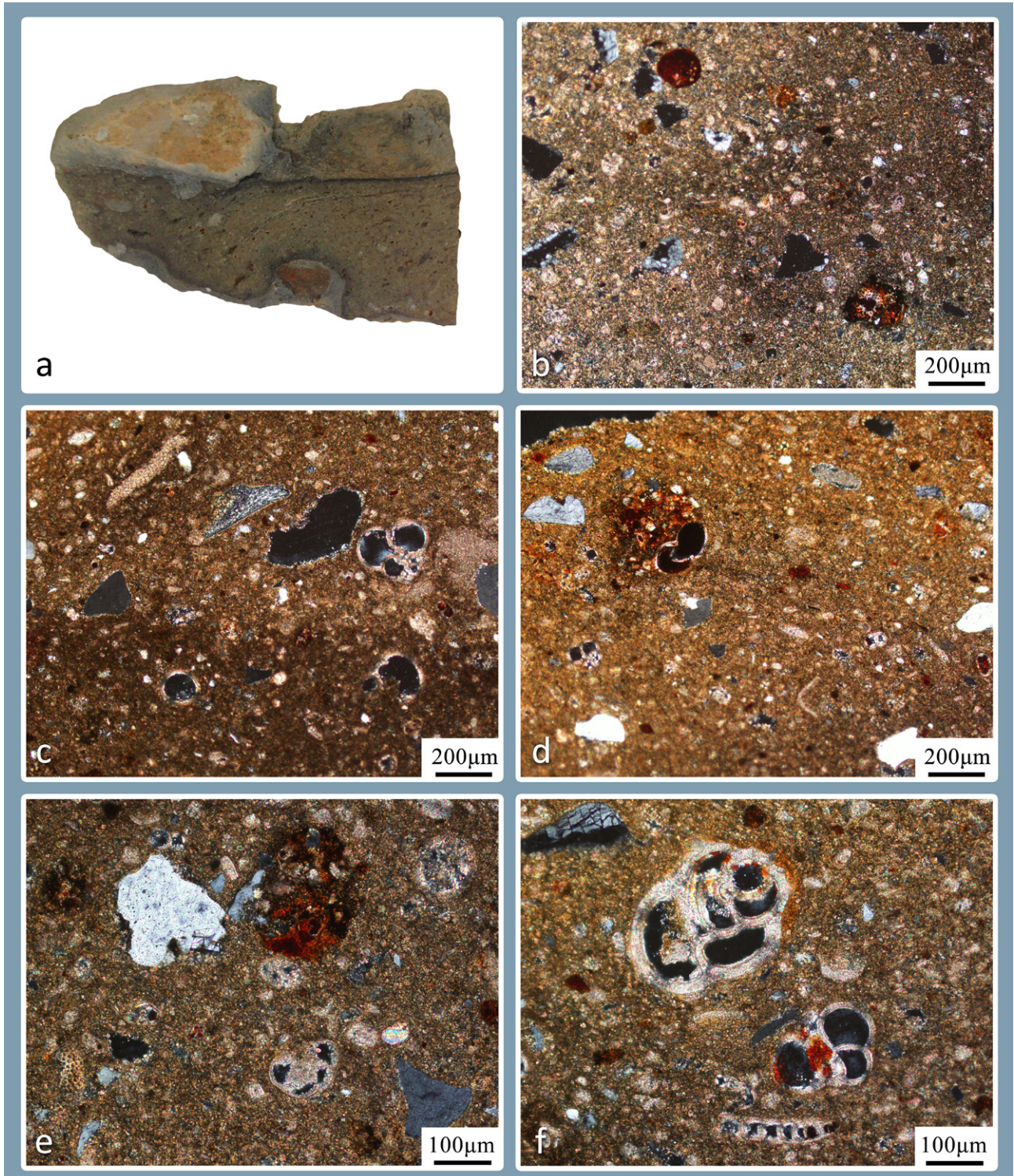


Figure 6. Photomicrographs of Amphora 44-2 exemplifying the petrofabrics of southern Lebanese production, showing a fresh break (a) and thin-sections under cross-polarized light: $\times 40$ (b–d) and $\times 100$ (e, f) (prepared by T. Sokolsky and S. Haad).

architectural remains found in Prausnitz's excavations are rather meager: after the destruction of the late Iron Age Phase 4 storage structure, some of its walls continued to be used in a limited manner in Phase 3, as indicated by a mixture of Persian and Hellenistic material found on post-Phase 4 floors (Yasur-Landau et al., 2016: 205). An amphora shoulder incised with the Phoenician name *adnmlk*—probably yielded in an insecure context in these excavations—likely originated in Phase 3 as well (Prausnitz, 1993: 23; Yasur-Landau et al., 2016: 215 note 5). The place of Achzib within the Phoenician coastal settlement system of the Persian period and its maritime networks are likely documented in the 4th-century BCE Periplus of Pseudo-Scylax. The place name mentioned between Palaityros (Usu) and 'Akko is plausibly restored as Achzib, as it is the most important

location among the other toponyms (Lipiński, 2004: 300–304; Shipley, 2011: 44, 78, 181–182).

Conclusions

The inscription on the Achzib amphora of the Persian period, mentioning the Sidonian(s) and manufactured on the Lebanese coast between Tyre and Sidon, may reflect a maritime itinerary along the Phoenician coast between Sidon and Achzib. Indeed, such a coastal itinerary is described in the Periplus of Pseudo-Scylax, which was edited before 337 BCE—that is, the late Persian period. There, Sidon is described as “a city with an enclosed harbor”, and Achzib is mentioned as a city “with a river”, probably referring to its riverine harbor (Shipley, 2011: 7, 44, 78).

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